

***A STUDY ON
ANTI INFLAMMATORY AND ANALGESIC ACTIVITY
OF THANDRIKKAI CHOORANAM
&
LINGA CHENDOORAM***

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CERTIFICATE

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INTRODUCTION

Siddha system is one of the oldest systems of medicine in India. The term '**Siddha**' means achievement and the '**Siddhars**' were saintly figures who achieved results in medicine through the practice of yoga. Eighteen '**Siddhars**' seem to have contributed towards the development of this medical system.

This system also deals with the concept of salvation in life. The exponents of this system consider achievement of this state is possible by medicines and meditation. The system has developed a rich and unique treasure of drug knowledge in which use of metals and minerals is very much advocated.

Siddha concepts are based on the '**Pancha boothic**' (Five elements: Piruthivi, Appu, Theyu, Vayu and Aakayam) theory. The drugs are being selected based on the pancha boothic theory.

One can be proud that this ancient system of medicine belongs to our nation. It is everyone's responsibility to elucidate the hidden secrets of this system with the help of modern science.

Remaining this the author selected '**Thandrikkai Chooranam**' for the disease anal keel vayu. It is not a newer discovery but it is simple endeavour of unveiling the secrets of Siddha medicine with the assistance of modern technology.

AIM & OBJECT

Jeevagar - Personal doctor of BUDDHA

At his young age he was learning Medicine at Monastery. One day, the Master indicated the deep forest to his disciples and said “The person who have take a plant which is not used in Medicine from this forest, will be my best student”

The disciples entered into the forest. Every one came with one plant and argued with master that it was not used in Medicine. But, all the arguements were dissolved when the Master explained the medicinal uses of that plant correctly.

Finally, after going many months, Jeevagar who was very tired, came without any plant and said “I am so sorry Master, I can’t find only one plant for useless of Medicine”

The Master was so, happy and said “you are my best student in all”

From above mentioned the myth It is evidenced that all plants are used in Medicine on some how.

According to the WHO, up to 80 percent of developing countries, populations use traditional medicines as their primary source of health care.

When going through the Siddha Materia Medica. The author found that a plant known as **THANDRIKKAI** (*Terminalia bellirica*) has potent anti – inflammatory and analgesic properties, still pharmacological and clinically) and unexposed. So, the author

decided to take this plant for his dissertation study and prove its efficacy over azhal keelvayu (osteo arthritis)

In this dissertation work, **THANDRIKKAI CHOORANAM**, is done with view to assess the Medicinal effect on Azhal keel vayu,

1. What siddhar's. have written about then THANDRIKKAI CHOORANAM in literary and Gunapadam aspects, related to vatha disease.
2. Botanical aspects
3. Biochemical aspects
4. Pharmacological analysis
5. Antimicrobial analysis
6. Clinical study of its effect on Azhal keel vayu

BOTANICAL ASPECT

Thandri is a deciduous tree. Taxonomic position according to Benthem and hooker's classification (1867) *Terminalia bellerica* (Roxb) Gaertn is classified as follows:

Kingdom	-	Plantae (தாவர உலகம்)
Division	-	Angiosperms (பூக்கும் தாவரங்கள்)
Class	-	Dicotyledons (இருவிதையுடையன)
Subclass	-	Polypetalae (அல்லி இதழ்கள் இணையாதவை)
Series	-	Calciflorae (புல்லி இதழ்கள் இணைந்தவை)
Order	-	Myratalles (கீழ்மட்ட சூலகப்பை)
Family	-	Combretaceae (கடுக்காய் குடும்பம்)
Genus	-	<i>Terminalia</i>
Species	-	<i>Bellerica</i>
Binomial Name	-	<i>Terminalia bellerica</i>

Identifying characters

A large deciduous tree with bluish or ashey grey bark and about 20-25 M height.

Leaves

Clustered at branchlet ends. Simple exstipulate, petiolate, laminae broadly elliptic, 8.0 – 20.0 cm long, the bases oblique, the margins entire, the tips rounded to sub acute, unicostate, reticulate, the surfaces glabrous.

Inflorescences

Axillary spikes, clustered, sometimes cauliflorous.

Bracts

Small, Caducous

Flowers

About 1.25 cm across, dirty-grey or greenish yellow and with offensive smell. Ebracteolate, sessile, the bisexuals about four fifths of the spike length the staminate few, only at the upper ends of spike, actinomorphic, pentamerous, epigynous.

Calyx

Synsepalous, 5-fid, campanulate, pale yellow, the lobes small, subulate, the outer surfaces glabrous the inner vilious.

Corolla

Absent

Androecium

Poly androus, stamens 10, in 2 whorls, the filaments equal in length, the anthers dithecous, oblongoid, versatile, dehiscence longitudinal, disc present.

Gynoecium

Pistil 1, ovary ellipsoid, tomentosa, 1 carpelled, 1-loculed, the ovules 1-2, pendulous, the style, the stigma simple.

Fruit

2.5 cm long, a drupe, broadly ellipsoid, tomentosa, coriaceous.

Seed

Solitary, broadly ellipsoid, 5-ribbed when dry, rugose, non-endospermic.

Flowering period

February- March

Fruiting period

December – January

Ref: <http://www.taninst.net/myanmedplants/TIC/famc/combretaceae.htm>

- Medical plants and raw drugs of India by Purshotam Kaushik,
Anil Kumar Dhiman, page 254, 255

Macroscopic description

Fruit nearly spherical to ovoid, 2.5-4 cm in diameter. Fresh ripe fruits slightly silvery or with whitish shiny pubescent surface. Mature fruits grey or grayish-brown with slightly wrinkled appearance, rind of fruit shows variation in thickness from 3-5 mm, taste – Astringent.

Microscopic Description

Transverse section of fruit shows an outer epicarp consisting of a layer of epidermis, most of epidermal cell elongate to form hair like protuberance with swollen base, composed of a zone of parenchymatous cells. Slightly tangentially elongated and irregularly arranged, intermingled with stone cells of varying shape and size. Elongated stone cells found towards periphery and spherical in the inner zone of mesocarp in groups of 3-10. Mesocarp traversed in various direction by numerous vascular stands, bundles collateral, endarch. Simple starch grains and some stone cells found in most of mesocarp cells, few peripheral layers devoid of starch grains, rosettes of calcium oxalate and stone cells present in parenchymatous cells. Endosperm composed of stone cells running longitudinally as well as transversely.

Identity, purity and strength

Foreign matter	-	Not more than 2%
Total ash	-	Not more than 7%
Acid insoluble ash	-	Not more than 1%
Alcohol – Soluble extractive	-	Not less than 8%
Water – Soluble extractive	-	Not less than 35%

- (The Ayurvedic Pharmacopoeia of India – Vol. I,
Government of India (1990) Page 26)

Occurrence and distribution

It is found distributed through out the forest of India upto 914m elevations and along the foot of the Himalayas.

Ref : Medicinal plants and raw drugs of India by Purshotam Kaushik, Anil Kumar Dhiman page 254, 255

India, Ceylon, Coimbatore, Peshawar, Myanmar and also grown throughout south west China.

Ref : Materia Medica of India and their therapeutics by R.N. Khory, N.N. Katrak, pages 258-259

Climate and soil

A large deciduous tree with large buttresses. It occurs naturally in moist deciduous tracts mostly and other types of forests also. Rainfall requirement is around 1000-3000mm. It tolerates shade in early seedling stages. It is susceptible to frost and drought. Fire can damage new regeneration. It is a coppice also. Naturally, it is seen associated with teak, sal etc.

Ref : Floristic Plants of the world Vol. III, by Dr. Rashtra Vardhana, Pages 855, 856

PHYTOCHEMICAL ASPECTS

β -sito sterol, Gallic acid, Ethyl galate, galloyl glucose, chebulagic acid.

Four Lignans : Termilignan, Thannilignan, Hydroxy 3'4" (methylene dioxy) flavan, Anolignan B.

Fruit Contains

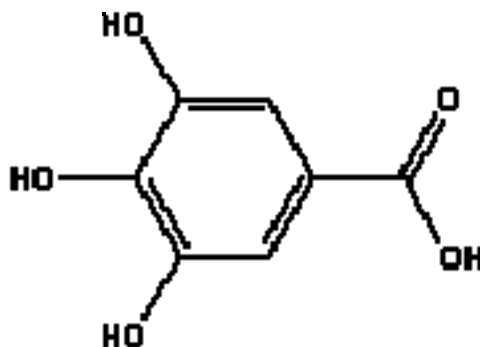
- Tannins about 23.60% - 37.36%
- Tannins composed of chebulinic acid, chebulagic acid
- Trigalloyl glucose and 1,2,3,4-6 penta gallyl glucose
- Corailagin, Terchebin, Glucogallin, Ellagic acid
- Gallic acid
- Other including shikimic acid, Dehydro-shikimic acid,
- Quinic acid, Arabinose, Fructose, sucrose, sugar
- Rhamnose and amino acid, Triterpenes, Terminaic acid
- Arjugenin, Arjunolic acid, Chebupentol also contains
- Semnoside A, Chebulin, Tannose, Poly Phenol oxidase
- Per oxidase, Ascorbic oxidase etc.

Bark Contains

β - Sito sterol, Tannins, ellagic acid, Gallic acid and catedol

Gallic Acid

3,4,5 – Trihydroxy benzoic acid



- Formula – $C_7H_6O_5$
- Biological activities of gallic acid include
- **Anti inflammatory and Analgesic** Anti bronchitic, Antiallergic , Anti-oxidant, Anti-peroxidant
- Anti-viral, Bacteristat, Broncho dialator, Immuno suppressant,
- Astringent

Ellagic Acid

Inhibit certain carcinogen – induced cancers and may have other chemopreventive properties

Constituents in volatile oil

Hexa decanoic acid, linoleic acid, 9, 12 – octa deca dionioic acid, heptadecane, octadecane, cis-alfa santalol

2.6 – dimethyl heptadecane, 2.6 –bis (1.1 – dimethyl ethyl) – 4 - methyl phenol, eicosane, Benzoic acid, penta decane.

Ref : <http://www.mididea.com/products/proper/proper060.html>

2) Analysis of the fleshy fruit – pulp gave the following values

Moisture	-	6%
Tannin	-	21.4%
Water – extractables	-	44%
Lovinbond colour		

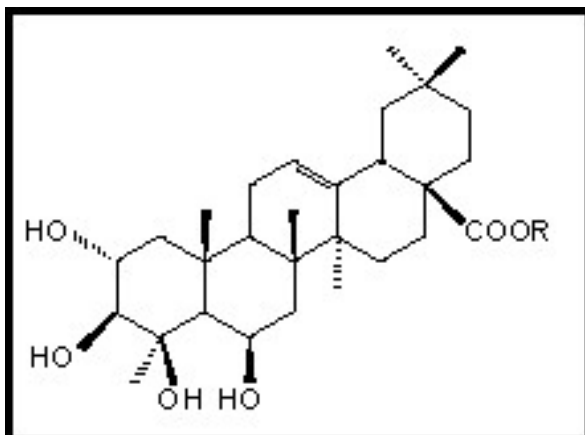
The presence of a new cardia glycoside, named ‘bellericanin’ in the fruit-pulp

The fruits (without kernels) can be used for the preparation of oxalic acid.

Ref : The wealth of India, Vol. X, Pages 164 to 167

3) Two new pentacyclic triterpene acids – ‘Bellericagenins – A & B’, and their glycoside – Bellericasides A and B isolated from stem bark

Ref : Compendium of Indian Medicinal plants Vol V. page 838.

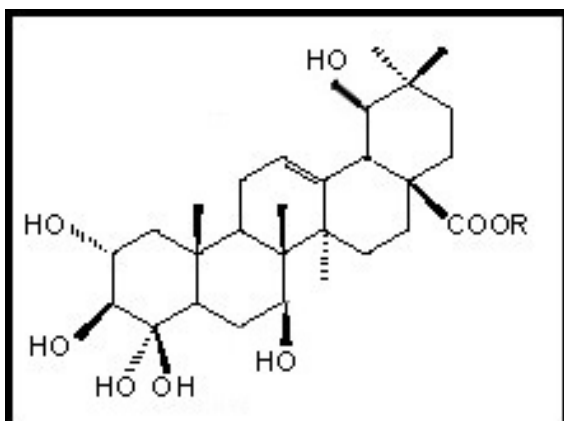


Bellericagenin - A

R = H

Bellericaside –A

R = Glucose

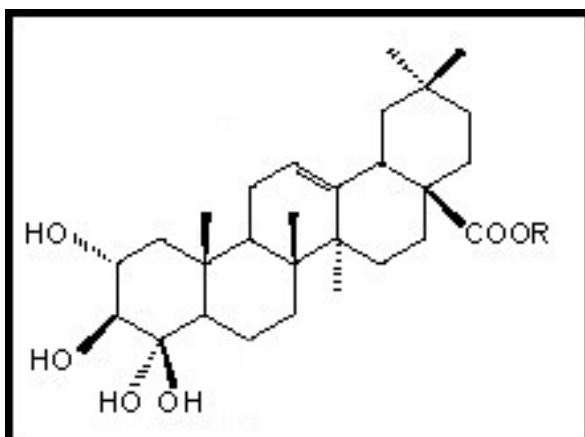


Bellericagenin - B

R = H

Bellericaside –B

R = Glucose



Bellaric acid

R = H

Bellericoside

R=Glucose

GUNAPADAM ASPECTS

தான்றி

இது மர வகுப்பைச் சேர்ந்தது. இந்தியாவில் காடுகளிலும், மலை அடிகளிலும் உயர்ந்து வளரும். இதன் காய்க்கு தான்றிக்காய் என்பது பெயர்.

தான்றிக்காய் கழற்சிக் கொட்டைப் பருமனும், சிறிது மஞ்சள் நிறமாயும் ஐந்து வரிகளை உடையதாக இருக்கும் உள்ளிருக்கும் கொட்டையை நீக்கி விட்டு தான்றிக்காய் தோலை மருத்துவத்திற்கு பயன்படுத்தவேண்டும்.

வேறு பெயர்கள்

I. அதம், அக்கந்தம், அக்காத்தான், அமுதம், அம்பலத்தி, ஆராமம், எரிகட்பலம், கந்தகட்பலம், கந்துகன், கலித்துருமம், களத்தூன்றி, சகதம், தாபமாரி, வாந்தியம், வித்தியம், விபீதகம், திறலிங்கம், பூதவாசம், தானிக்காய், தாணிக்காய்.

(குணபாடம் - மூலிகை வகுப்பு - பக்கம் 512)

பெயர்க்காரணம்:

1. அக்கந்தம் : (அ+கந்தம்)

அ - சிவன் (வளி), விஷ்ணு (பித்தம்), பிரம்மா (கபம்) குறிக்கும்
கந்தம் - தான்றி

தான்றிக்காய் முக்குற்றங்களை தன்னிலைப்படுத்தும் குணமுடையது.

2. அமுதம்:- (நீர்)

பித்த நோய்களில் (குறிப்பாக அம்மை நோய்), உடல் உஷ்ணத்தை குறைக்க தாபமகற்றியாக பயன்படுகிறது

3. அம்பலத்தி:- (அம்பலம் - பலர்கூடும் வெளியிடம், ஊர்ச்சபை)

ஊர்ச்சபை கூடும் இடங்களில், நிழல்தரும் பொருட்டு வளர்க்கப்படும் மரங்களில் ஒன்று தான்றி

4. ஆராமம்:- (பூந்தோட்டம், உபவனம்)

பூந்தோட்டம், உபவனம் போன்ற இடங்களில் தான்றி வளர்க்கப்பட்டது

5. ளரிக்கட்பலம்:- (ளரி + கட்பலம்)

ளரி - பிரகாசம், தீ
கட்பலம் - தான்றி

தான்றி மரக்கட்டைகள் ளரிப்பதற்கு விறகாக பயன்படுத்தப்படுகிறது

6. கலித்துருமம் :- (கலி + துருமம்)

கலி - வலிமை
துருமம்- மரம்

வலிமையான மரங்களில் ஒன்று தான்றி

7. களந்தூன்றி :-

களம் - ஊர்சபை கூடும் இடம்
- ஊர்சபை கூடும் இடங்களில் தான்றி வளர்க்கப்பட்டது.

8. சகதம்:- (சக + தம்)

சக - துணை, தம் - மூச்சு

இயல்பான மூச்சுவிடுதலுக்கு தான்றிக்காய் துணைபுரிகிறது.

9. தாபமாரி :-

தாபம் - உஷ்ணம், அதீதவெரிச்சல்

உஷ்ண நோயில் தாபமகற்றியாக தான்றிக்காய் பயன்படுத்தப்படுகிறது.

10. வித்தியம் :- (அறிவு)

முக்குற்றங்களை (சன்னி நோயில்) தன்னிலைபடுத்தி அறிவுக்கு தெளிவுண்டாக்க தான்றிக்காய் பயன்படுத்தப்படுகிறது.

11. வாந்தியம்:-

அதிகயளவு தான்றிக்காயை உண்ணும்பொழுது வாந்தி உண்டாக்கும்.

12. திறலிங்கம்:- (திறம் + லிங்கம்)

திறம் - மருத்துவம்

லிங்கம் - ஆண் குறி

ஆண்குறி நோயினை போக்க (காமியபுண்) தான்றிக்காய் பயன்படுத்தப்படுகிறது.

13. பூதவாசம்:- (பூதம் + வாசம்)

பூதம் - அளவில் பெரியது.

வாசம் - வாசனை

தான்றி மரமானது நாற்ற முள்ள மங்கலான பச்சை நிற பெரிய மரம்.

14. விபீதகம்:- (வி + பீதகம்)

வி - கண்

பீதகம் - மஞ்சள்

கண்ணுக்கு ஒளியுண்டாக்க மஞ்சள் நிற தான்றிக்காய் பயன்படுத்தப்படுகிறது.

II. “பேரான வக்கி அம்பலத்தி யென்றும்

பேசினோ மதிரூப மென்றும் பேரு

வாரான வனந்தியென்றும் அதற்கு பேரு

வளமான வடம்பியென்று மதற்கு பேரு

காரான கலித்துருசு மென்றும் பேரு

காந்தரூப மென்றதற்குப் பேருண்டாச்சு

மாரான நாதியென்று மதற்குப் பேரு

மகத்தான தான்றிக் காயற்குப் பேரெ.”

(அகத்தியர் பஞ்சகாவிய நிகண்டு - பக்கம் 140)

அம்பலத்தி, அதிரூபம், வனந்தி. வடம்பி, கலித்துருசும், காந்தரூபம், நாதி.

பெயர்காரணம்

1. அதிருபம்:-

ரூபம் - உருவம், அழகு, ஒளி

முக்குற்றங்களை தன்னிலைபடுத்தி அதிகளவு உடற்கு அழகையும், ஒளியையும் கொடுக்கும் இயல்புடையது தான்றிக்காய்.

2. வனந்தி:-

வனந்தம் - காட்டோரம்

தான்றி காடுகளில் வளரும் மரமாகும்

3. வடம்பி:-

வடம் (ஊர்)

ஊரினுள் வளர்க்கப்படும் மரம் தான்றி

4. கலித்துருசம்:-

கலி - வலிமை

வலிமையான மரம் தான்றி

5. காந்தரூபம் (காந்தம் + ரூபம்):-

காந்தம் - பிரகாசம், அழகு

ரூபம் - உருவம்

உடலுக்கு அழகையும், ஒளியையும் கொடுக்கும் குணமுடையது தான்றிக்காய்

- குணபாடம் முலிகை வகுப்பு

- தமிழ் - ஆங்கிலம் அகராதி, டி.வி. சாம்பசிவம் பிள்ளை

- மதுரை தமிழ் பேரகராதி, இ.மா. கோபாலகிருஷ்ணகோன்

- பெருஞ்சொல்லகராதி, தமிழ் பல்கலை கழகம்

- நோயில்லா நெறி, மரு கோ. துரைராசன்

III. “தான்றிக்காய் பேர்தனையே சாற்றக் கேளு

சாங்கமாம் விபிதகமாங்க கறுஷ பலமாகும்

மூன்றிக்காய் வசந்தோடே சங்கிலித் தாக்கு

மீறியதோர் பூதவாசனியுமாகும்

பூன்றிக்காய் பூதவிருட்சத்து வாகும்
போக்கான லட்சுமி வாசனியுமாகும்
மீன்றிக்காய் தேசயங் குஷ்டானியுமாகும்
மியம்பியதோர் தூன்றிக்காய் பேருமாமே”

சாங்கம், விபீதகம், கறுஷபலம், வசம், சங்கிலித்தாக்கு, பூதவாசனி,
பூதவிருட்சம், லட்சுமி, வாசனி, தேசியங் குஷ்டானி.

(போக முனிவர் நிகண்டு 1200, பக்கம் -200)

Vernacular Names

Sans : Vibhitaka, Vibhitaki, Vipitakaha, Anilaghna, Aksha, Bahira,
Karshapalah, Kaligrnamah, Bhuta-vasah

Eng : Beleric myrobalans

Hind : Bhaira, Bahera, Bhora, Jagona, Bharla, Bahura

Ben : Bohera, Baheri, Bhaireh, Buhuru, Boyra

Panj : Bahira, Bahera, Birha, Bahela, Bayrah

Bom : Behera, Behaira, Beluda, Behda, Bherdha, Balra, Bahunda, Yella,
Goting, Yel, Behedan, Bahasa

Mah : Bherda, Baheda, Bahera, sagwan, Beda, Yehola, behada

Guj : Berang

Tam : Tani, thani, kattu-elupay, tharik-kay, thandi-tonda, chattu-elupa,
Tamkai, vallaimurdu, Tanikai, Tankrikkai.

Tel : Tani, Tandi, Tandikaya, Thandra, Thana, Tadi, kattu-ohupoe,
Tandrikaya

Mal : Tannikai, Tanni

Kan : Tanrikai, Tari, Shanti-Mara

Arab : Baheela

Ref :

1. The Indian Materia Medica, Vol. I, by K.M. Nadkarni, Page No. 1202
2. The Wealth of India, Vol. X, Page No. 164

3. Medicinal Plants by P.C. Trivedi, Page no - 166.
4. Materia Medica of India and their therapeutics by R.N. Khory, N.N. Katrak, Page No. 258

பயன்படும் உறுப்புகள்

1. இலை, பழம், விதை - குணபாடம் மூலிகை வகுப்பு
2. Fruits, Bark, Gum - Medicinal Plants and raw drugs of India – by Purshotam Kaushik, Anil Kumar Dhimen – Page -254.
3. Bark, Fruits, Gum - Medicinal Plants, by P.C. Trivedi, page 166
4. Fruits - The Indian Materia Medica, Vol.I, by Dr. K.M. Nadkarni, page 1202

- | | | |
|--------|---|-----------|
| சுவை | - | துவர்ப்பு |
| தன்மை | - | வெப்பம் |
| பிரிவு | - | இனிப்பு |

- குணபாடம் மூலிகை வகுப்பு, பக்கம் 512

Taste

Bitter & Astringent

- Medicinal plants and raw drugs of India by Purshotam Kaushik, Anil Kumar Dhiman page 254.

Astringent

- 1) The Indian Materia Medica vol. I by Dr. K.M. Nadkarni, page 1202
- 2) The wealth of India. Vol. X - page 164 to 167
- 3) Materia Medica of India and their therapeutics by R.N. Khory N.N. Katrak, page 258.

சுவை : துவர்ப்பு

- அனுபவ வைத்திய தேவரகசியம் பக்கம் 60,
- தமிழ் - ஆங்கில அகராதி - Vol. IV, by T.V. சாம்பசிவம் பிள்ளை.

செய்கை

துவர்ப்பி (Astringent)	-	ஸங்கோஸனகாரி
கோழையகற்றி (Expectorant)	-	கபஹரகாரி
மலமிளக்கி (Laxative)	-	லகுவிரேசினி
உரமாக்கி (Tonic)	-	பலகாரி

- குணபாடம் மூலிகை வகுப்பு - பக்கம் 512
- தமிழ் - ஆங்கில அகராதி - T.V. சாம்பசிவம் பிள்ளை, Vol. IV.
- அனுபவ வைத்திய தேவரகசியம் - பக்கம் 60.

2) Extracts of the fruit - Anti Bacterial properties against.
Micrococcus pyogenes, aures and
Escherichia coli.

- The Wealth of India - Vol. X - page 164 to 167

3)

- Mild diuretic, Astringent
- **Anti inflammatory**, Anti-bilious
- Stomachic, Anti asthamatic
- Tonic, inbronchitis
- Strangury, purgative, Demulcent,
- Anti-diarrhoeal, Anti leprotic,
- Anti dropsical, attenuant.

- Medicinal Plants by P.C. Trivedi, Page 166

4) Astringent, Tonic,

- Laxative, Anti-pyretic,
- Anti-diarrhoeal

- Medicinal plants and raw drugs of India by
Purshotam Kaushik, Anil Kumar Dhimen, page 254.

பொதுகுணம்

- 1) “சிலந்தி விடம் காமியப்புண் சீழான மேகங்
கலந்துவரும் வாதபித்தக் காலோ - டலர்ந்துடலில்
ஊன்றிக்காய் வெப்ப முதிரபித் துங்கரக்குந்
தான்றிக்காய் கையிலெடுத் தால்”

“ஆணிப்பொன் மேனிக்கழகும் ஒளியுமிகும்
கோணிக் கொள் வாதபித்தக் கொள்கைபோம் - தானிக்காய்
கொண்டவர்க்கு மேகமறும் கூறா அனற்றணியும்
கண்டவர்க்கு வாதம்போம் காண்”.

வாதம், சிலந்தி, நஞ்சு, ஆண்குறிப்புண், வெள்ளை, குருதியழல் நோய், வளி, தீ, குற்றங்களால் வரும் நோய்கள் போம். மேலும் உடற்கு அழகையும் ஒளியையும் கொடுத்து முக்குற்றங்களையும் தன்னிலைப்படுத்தும்.

- குணபாடம் மூலிகை வகுப்பு - பக்கம் 512
- பதார்த்த குண விளக்கம் - பக்கம் 411

- 2) சுவாசம், காசம்,

- இரத்தபித்தம், சீழ்மேகம் குணமாகும்
- அனுபவ வைத்திய தேவரகசியம், பக்கம் 60

- 3) காசம், சுவாசம்,

- வயிற்றுக்கழிச்சல், வீக்கம்,
- பல்வலி - முதலிய நோய்கள் போம். தலைமயிர் வளரும்.
- தமிழ் ஆங்கில அகராதி T.V. சாம்பசிவம்
பிள்ளை, Vol. IX.

- 4) Fruit - Cough, Hoarseness, Eyedisease, Scorpion sting,
Head ache, Piles, Chronic diarrhoea.

- The Indian Materia Medica - Vol. I by Dr. K.M. Nadkarni -
page 1202 to 1204
- The Wealth of India, Vol. X, Page 164 to 167

- 5) Sore throat, pharyngitis, laryngitis, cough, catarrh, Bronchitis, Gastric ulcers, Hemorrhoids, chronic diarrhoea, Dysentery, parasites, cholelithiasis, ophthalmia, headache, Alopecia and premature greying, oedema, Rheumatism (topical), Wounds (topical).

- www.toddcaldecott.com/vibhitaki.html

- 6) In Ayurveda-Bitter, Astringent, Laxative, Germicidal, Antipyretic, cough, Tuberculosis, Eye diseases, Dyspepsia, diarrhoea, dysentery, inflammation of the small intestine, Biliousness, Flatulence, Liver disease, leprosy, To cleanse the blood and the voice. To promote hair growth.

- [www.pharmainfo.net/exclusive/reviews/triphala a reputed herbal formulation/1](http://www.pharmainfo.net/exclusive/reviews/triphala_a_reputed_herbal_formulation/1)

- 7) Root bark : For tooth ache and gum inflammation.
 Bark : Anaemia, jaundice, leucoderma, Dysentery
 Dried leaf : Indigestion
 Flower : Splenomegaly, Dysentery, chest pain, purifies blood, bronchitis
 Fruit rind : Asthma, cough, laryngitis, bronchitis, cough, Astringent
 Fruit flesh : Lithiasis, dysuria, ophthalmia, Asthma, cough, palpitation of heart, **Analgesic for pains and aches.**
 Flesh of ripe Fruit : **Arthritis**, ophthalmia
 Fruit powder : Impotency, Biliary infection, cholecystitis, indigestion, unproductive cough, bronchitis
 Seed : Bronchitis, emesis, giddiness, Cough, to ally thirst, Heals boils and carbuncles.

- [http://www.taninst.net/myan med plants/TIC/famC/combretaceae.html](http://www.taninst.net/myan_med_plants/TIC/famC/combretaceae.html)

- 8) Fruits : Stimulating astringent, any condition of atony, prolapse, relaxation of the mucosa, cough sore throats, laryngitis, dyspepsia, useful in uterine and colonic prolapse, Hemorrhage.

Fresh fruit pulp : Used as a collyrium in the treatment of nontraumatic corneal ulcer.

- www.toddcaldecott.com/vibhitaki.html

வழக்குகள்

- 1) தானற்றிக்காயைச் சுட்டு மேல்தோலை பொடித்து, அவ்வெடை சர்க்கரை சேர்த்து, தினம் இருவேளை 4 கிராம், வெந்நீரில் கொடுக்க பல்வலி தீரும்
- 2) தானற்றிப் பொடியைத் தேனில் கொடுக்க அம்மை நோய் நீங்கும்
- 3) அரைப்பலம் தானற்றிக்காய்த் தோல், 170 மிலி நீரில் சேர்த்து 1/3 பங்காகக் காய்ச்சி தேன் 28 கிராம் சேர்த்து கொடுக்க இரைப்புத் தணியும்.
- 4) தானற்றிக்காய் பொடியுடன் சமஅளவு வெள்ளைச் சர்க்கரை கூட்டித் தேன்விட்டுப் பிசைந்து 4 கிராம் எடை வீதம் சாப்பிட்டு வர கண்ணுக்கு ஒளி உண்டாகும்.
- 5) புண்பட்ட இடங்களில் இதன் பருப்பை உரைத்துப் பூசு, புண்ணாறும்.
- 6) இதன் தளிரை இடித்துச் சாறு பிழிந்து, துல்லியதான மெல்லிய சீலையை அதில் நனைத்து, நிழலில் உலர்த்தி வைத்துக்கொண்டு முப்பிணி நோயிலுண்டாகும், தொண்டைக்கட்டு, கோழைக் கட்டல், மேல் மூச்சு வாங்கல், முதலியவற்றிற்கு 2 அங்குல சதுரமுள்ள மேற்படி சீலையை 15 மிலி (அ) 30 மிலி நீரில் கசக்கிப்பிழிந்த சாற்றைப் புகட்ட நன்மையும் தரும்.
- 7) தானற்றிப்பொடி, பாறையுப்பு, திப்பிலிப்பொடி, ஓரெடை கூட்டி மோரிலிட்டு அரைத்துக்கொடுக்க தொண்டைக் கம்மல் நீங்கும்.

- 8) தானுறிக்஑ாயை நெய்விட்டு வறுத்து ஑ோதுமை மாவைப் பிசைந்து மூடி வெதுப்பி, வாயிலடக்கி வைக்க, தொண்டைப்புண், இருமல், ஑ோழை இவை விலகும்.
- 9) கடுக்காய், நெல்லிக்காய், தானுறிக்஑ாய் ஓர் அளவாகச் சேர்த்துக் குடிநீரிட்டுப் புண்களைக் கழுவி வரப் புண்கள் ஆறும்.

- குணபாடம் மூலிகை வகுப்பு - பக்கம் 513

- 10) With salt and long pepper, pulp of fruit is given in the form of electuary in cough, hoarsness sore throat and dyspepsia.
- 11) For wounds suspected to syphilitic character, one part of Rasakarpooram mixed in 8 parts of Triphala is generally used.
- 12) Dried ripe fruit is astringent and employed in dropsy, piles and diarrhoea also occasionally in fever.

- The Indian Materia Medica - Vol. I by Dr. K.M. Nadkarni, Page 1202 to 1204

- The Wealth of India- Vol. X, Page 164 to 167

- 13) The kernel oil from the fruits is applied to hairs and Rheumatic swellings.
- 14) The Fruits pulp mixed with honey is used in ophthalmic.
- 15) However, excessive of seed pulp may cause in toxication.

-Medicinal Plants and raw drugs of India by Purshotam Kaushik, Anil Kumar Dhiman, page 254.

MEDICAL RESEARCH

AIDS

An extract of *Terminalia bellerica* showed significant inhibitory activity on human immuno deficiency virus -1 reverse transcriptase with IC 50 \leq 50 micrograms/M%

Four lignans (Termilignan, Thannilignan, Hydroxyl- 3'4' (Methylenedioxy) flavan, Anolignan -B) possessed demonstrable anti-HIV-1 in vitro

Antimalarial

Four lignans possessed demonstrable antimalarial activity in vitro.

Anti fungal

Four lignans possessed demonstrable antifungal activity in vitro.

Anti-Mutagenic

Two polyphenolic fractions isolated from *T. Bellerica* were significantly effective against mutagenic effects in *Salmonella typhimurium*. Interaction of the polyphenols with S9 proteins may be the probable cause of the inhibitory effect.

- www.toddcaldecott.com/vibhitaki.htm.

Scientific studies

- 1) *T. bellerica* fruit extract has anti-bacterial activity against *micrococcus pyogenes* and *Escherichia coli*
- 2) Oral administration of a water - soluble fraction of the *Terminalia bellerica* demonstrated significant hepato protective activity in

vivo against experimental liver injury induced by carbon tetrachloride.

- 3) An alcoholic extract of *T. bellerica* fruit was found to have a marked stimulant effect on the secretion of bile in vivo. The total solid content of the bile was also increased. An aqueous extract had poor activity in the same test.
- 4) An open clinical study in 93 patients suffering from respiratory conditions found that *Terminalia bellerica* had anti-asthmatic, anti-spasmodic, expectorant and anti-tussive effects.
- 5) Oral administration of the *T. bellerica* extract (100 mg/kg body weight) reduced the blood sugar level in normal and in alloxan (120mg/kg) diabetic rats significantly.
- 6) The anti-oxidant properties of methanolic extracts of 12 Indian Medicinal plants including *terminalia bellerica* were evaluated by in-vitro DPPH Method and lipid peroxidation assay. The results suggest that all the tested plant materials have moderate to potent anti-oxidant activity.

- [www.pharmainfo.net/exclusive/reviews/triphala a reputed herbal information/1](http://www.pharmainfo.net/exclusive/reviews/triphala%20a%20reputed%20herbal%20information/1)

வாதநோய்களுக்கான தானறிக்காய் சேரும் மருந்துகள்

1) சிரோரத்தின ஸ்நானத் தயிலம்

நல்லெண்ணெய்	-	1 படி
பால்	-	1 படி

- தானறிக்காய்
- கரிசாலை
- வில்வயிலை
- நொச்சி கொழுந்து
- நெல்லிக்கொழுந்து
- அல்லிக்கொழுந்து
- அழுக்கிறா
- தண்ணீர்விட்டான்
- சித்தாமூட்டி
- சந்தனம்
- தேவதாரம்
- அகிலகட்டை
- முத்தக்காசு
- முதியார் கூந்தல்
- கச்சோலம்
- சீரகம்
- நன்னாரி
- கோஷ்டம்
- கடுக்காய்
- நெல்லிமுள்ளி
- சுக்கு
- ஓமம்
- சோம்பு
- வில்வபழ ஒடு
- சாம்பிராணி

- கஸ்தூரி மஞ்சள்
- வெட்டிவேர்
- சிவனார்வேம்பு
- கொல்லன்கோவை

இவைகளை சமஅளவு எடுத்து சூரணித்து மேற்படி எண்ணெயுடன் கலந்து கடுகுபதமாக காய்ச்சிக் கொள்.

உபயோகம் : 1 மண்டலம் தலைமுழுகிவர நோய்கள் தீரும்.
விடாமல் தலை முழுகிவர சகல நோய்களும் தீரும்
தீரும்நோய்கள் : நாலாயிரத்து நானூற்று நாற்பத்தி எட்டு நோய்கள் நீங்கும்.
- தன்வந்திரி வைத்தியம் - 1000 பக்கம், 68, 69, 70

2) சகல வாதங்களுக்குச் சூரணம்

- திரிகடுகு
- கடுக்காய்
- தான்றிக்காய்
- நெல்லிமுள்ளி
- வாய்விளங்கம்
- பெருங்காயம்
- சவுட்டுமண்
- கடுகுரோகிணி
- கோஷ்டம்
- சடாமாஞ்சில்
- ஏலம்
- அதிமதுரம்
- கிராம்பு
- சந்தனம்
- தாளிசபத்திரி
- சிறுநாகப்பூ

இவைகள் சம எடையில் எடுத்துக் கொள்ளவும்.

மேற்கண்ட சரக்குகளை சூரணித்து அதற்கு சம எடை சீனி கூட்டிக் கொள்ளவும்.

அளவு : வெருகடியளவு
தீரும் நோய்கள் : எண்பது வாதம், பித்தம், சந்துவாதம், முடக்குவாதம், முகவாதம், இடுப்பு வாதம், சகல வாய்வும் நீங்கும்.
- தன்வந்திரி வைத்தியம் - 1000 பக்கம், 136

3) காலகோடி ரசம்

கடுக்காய்	-	3 வராகன்
தான்றிக்காய்	-	3 வராகன்
நெல்லிவற்றல்	-	3 வராகன்
சூதம்	-	1 வராகன்
கந்தகம்	-	1 வராகன்
தாளகம்	-	1 வராகன்
இலிங்கம்	-	1 வராகன்
நாபி	-	2 வராகன்
சுக்கு	-	3 வராகன்
அரிசிதிப்பிலி	-	3 வராகன்
மிளகு	-	3 வராகன்
சிவப்பு அல்லிகிழங்கு	-	1 வராகன்
நெருஞ்சிவேர்	-	1 வராகன்
நேர்வாளம் (சுத்தி)	-	7 வராகன்

செய்முறை

மேற்கண்ட சரக்குகளை கல்வத்திலிட்டு சிகப்பு அல்லிக் கிழங்கு சாறுவிட்டு 3 சாமம் நன்றாய் அரைத்து குன்றியளவு மாத்திரைகளாகச் செய்து நிழலில் உலர்த்தி சீசாவில் பத்திரப்படுத்தவும்.

உபயோகம்

இம்மாத்திரையை தினம் 2 வேளை கொள்ள இரண்டொரு தடவை மலசோதனையாகும். அதிகமாக இருப்பின் மருந்தனளவைக் குறைத்துக்கொள்ள வேண்டும்.

தீரும் நோய்

திரிபலாதி சூரணத்தில் கொடுக்க தலைநோய், இருமல் போகும்.
முடக்கற்றான் சாற்றில் கொடுக்க கீல்வாயு போகும்.

- (சிகிச்சாரத்ன தீபம் - பாகம் II, பக்கம் 172)

4) கோடாசிலை மாத்திரை

- | | | |
|----------------|----------|------------|
| - கந்தகம் | - சமஅளவு | |
| - தான்றிக்காய் | } | - பாதியளவு |
| - கடுக்காய் | | |
| - நெல்லிக்காய் | | |

வேலிப்பருத்தி சாற்றால் மேற்கூறப்பெற்ற அனைத்து சரக்குகளையும் நன்றாக அரைத்து பயறளவாகக் குளிகை செய்து வெயிலுலர்த்தி எடுத்து வைத்துக் கொண்டு வெந்நீரில் உட்கொள்ள வாதநோய் நீங்கிவிடும். நீரில் கொடுக்க - வாத கப நோய் நீங்கும்.

- (தேரையர் காப்பியம் - பக்கம் 48)

5) திரிபலாதி சூரணம்

- கடுக்காய்
- நெல்லிவற்றல்
- தான்றிக்காய் தோல்
- செவ்வியம்
- கடுகுரோகிணி
- மோடி

சமவெடையாகப் சூரணித்து தேன் கலந்துச் சாப்பிட்டாலும், அல்லது குங்கிலியச் சூரணத்தை கோமூத்திரத்துடன் கலந்த சாப்பிட்டாலும் ஊருஸ்தம்பவாதம் போகும்.

- (அனுபவ வைத்திய தேவ ரகசியம் - பக்கம் 577)

6) மேகநாதன் குளிகை

- | | | |
|------------|---|--|
| அளவு | : | கடலை/ 1 குளிகை - 1 வேளை |
| அனுமானம் | : | முருங்கை வேர்பட்டைச்சாறு, பாகலிலைச்சாறு |
| தீரும்நோய் | : | வாத உபத்திரவம், சர்வங்கம், புரளும் வாய்வு, வாதம் தீரும். |

பத்தியம் : தயிர்சாதம் உண்ணவும்
- (வைத்திய அரிச்சுவடி - பக்கம் 98)

7) சவுபாக்கிய சுண்டி இலேகியம்

அளவு : 1 கடிகை பருமன் / 2 வேளை
தீரும்நோய் : வாதம், சூதகவாய்வு, வாய்வு தீரும்
பத்தியம் : கசப்பு, புளிப்பு, புகையிலை, போகம் நீக்கவும்
- (அகத்தியர் வைத்திய ரத்தினச்சுருக்கம் - 360, பக்கம் 55)

8) மஸ்துமிரசாயனம்

அளவு : பாக்களவு / காலை, மாலை 2 வேளை
தீரும்நோய் : வாதம், சூலை போம்
- (அகத்தியர் வைத்திய ரத்தினச்சுருக்கம் - 360, பக்கம் 55)

9) லஷ்மி நாராயண மாத்திரை

அளவு : குன்றியளவு மாத்திரை 2-3 வரை உட்கொள்க
(பெரியவர்களுக்கு)

அனுபானமும், தீரும் நோயும்.

முடக்கு வாய்வுக்கு - திப்பிலிக் கஷாயத்தில் தேன் சேர்த்து கொடுக்க
கீல்வாய்வுக்கு - வசம்பும், ஓமமும் சேர்ந்த சூரணத்தில் கொடுக்க
பத்தியம் - நல்லெண்ணெய், கடுகு, புளி, தேங்காய், மாங்காய்,
மாப்பண்டம் முதலியவைகளை நீக்கி இச்சாபத்தியம் கொள்க.
- (சிகிச்சாரத்னதீபம், சி. கண்ணுசாமிப்பிள்ளை, பக்கம் 136)

10) மண்டூர மாத்திரை

அளவு : குன்றியளவு, காலை, மாலை ஒவ்வொன்றாக சாப்பிட்டு 2
மணி நேரத்திற்குப் பின் மோர் சாதம் சாப்பிடுக. 20
நாள் - 1 மண்டலம் உட்கொள்ளவும்.
தீரும் நோய் : ஊருஸ்தம்ப வாதம்.
பத்தியம் : மோரன்னம் உண்ட பிறகு இடைவேளைகளில் உணவு
கொள்ள வேண்டின் புளியை நீக்கி இச்சாபத்தியமாகச் சாப்பிடுக
- (சிகிச்சாரத்னதீபம், சி. கண்ணுசாமிப்பிள்ளை, பக்கம் 145)

பிறநோய்களுக்கான தான்றிக்காய் சேரும் மருந்துகள்

1) ஆவாரைக் கியாமும்

1 - தோலா சூரணத்தை காற்படித் தண்ணீரில் போட்டு அரைக்காற்படியாகச் சுண்டக்காய்ச்சி ஆறவிட்டு வடித்துச் சாப்பிடவும். இப்படி தினம் இருவெளை 10-நாள் சாப்பிட மதுமேகம் அதனாலுண்டான அதிகதாகம், நீர்போக்கு அழலை நீங்கும்.

- (சிகிச்சாரத்னதீபம், பாகம் II, by சி. கண்ணுசாமிப்பிள்ளை, பக்கம் 136)

2) கோடாசுழி மாத்திரை

உபயோகம்

1 அல்லது 2 மாத்திரைகளை இஞ்சி ரசத்தில், தேனில் கொடுக்க சுரம், சந்நி முதலியவற்றுடன் குத்தல், குடைச்சல், பக்கநோய், மாரடைப்பு முதலியவை தீரும்.

பத்தியம்

கைப்பு, புளிப்பு நீக்கி இச்சா பத்தியமாக இருத்தல் சாலச் சிறந்தது.

- (சிகிச்சாரத்னதீபம், பாகம் II, by சி. கண்ணுசாமிப்பிள்ளை, பக்கம் 171)

3) இந்துப்பு சூரணம்

இந்துப்பு	}	-	வகைக்கு 6 பங்கு
சீரகம்			
ஓமம்			
தான்றிக்காய்	}	-	வகைக்கு 5 பங்கு
நெல்லிமுள்ளி			
சுக்கு			

செய்முறை

சூரணித்துக் கொண்டு அளவுப்படி கூட்டிக் காலை வேளைகளில் உண்டு வருக. இதனால் பசி தீரும்.

அளவு : வெருகடியளவு

தீரும்நோய்கள் : வயிற்றுக் கிருமிகள், வாதகுன்மம், சூலை, மூலம்

- (தேரையர் வாகடம், பக்கம் 161)

4) சன்னிசுர மாத்திரை

அளவு : 1-2 மாத்திரை
துணைமருந்து : இஞ்சிச்சாறு, துளசிச்சாறு
தீரும் நோய் : சன்னிவகைகள், சுரவகைகள் தீரும்

(அகத்தியர் பள்ளு - 200 பக்கம், 74)

5) தான்றியாதிக் கஷாயம்

- தான்றித்தோல்
- நெல்லிமுள்ளி
- சீவிய தேற்றான் கொட்டை
- கடலிரஞ்சியின் அடிமரப்பட்டை

வகைக்கு 1 பலம் எடுத்து இடித்து, ஒரு பாத்திரத்திலிட்டு இளநீர் 1-மரக்கால் விட்டு அடுப்பின் மேலேற்றி, எரித்துச் சின்னப்படி $\frac{1}{4}$ ஆக வற்ற வைக்கவும். இக்கஷாயத்தை பருகிவர தண்ணீர்த் தாகம் தீரும்.

(அகத்தியர் இரண்டாயிரம் - 3பாகம் - பக்கம் 2)

6) சந்தனாதி எண்ணெய்

உபயோகம் : இத்தலைத்தினால் தலைமுழுகிவர, நீரிழிவு, நீரடைப்பு, மாமிச வுடைப்பு, கல்லடைப்பு, நீர்கடுப்பு, மேகம், பெரும்பாடு, என்புருக்கி, நிணமுறுக்கி, வெட்டை, வறட்சி, எரிச்சல், கபம், மண்டைவலி, நேத்திரகாசம், குந்தம் முதலான 96 நோய்களும் தீரும்.

(அகத்தியர் இரண்டாயிரம் -3பாகம் - பக்கம் 17)

7) மன்மத சிந்தாமணி இலேகியம்

அளவு : கொட்டைப்பாக்களவு / 2 வேளை
பத்தியம் : பாலும், சாதம் கொள்ள வேண்டும்
நாளளவு : 20 (அ) 40 நாள் தின்றால் மிக நல்லது
பயன்பாடு : தேகபலத்துடன் தாதுவிர்த்தியுண்டாகும்.

(வைத்திய அரிச்சுவடி - செஞ்சி ஏகாம்பர முதலியார், பக்கம் 66)

8) திரிபலாதி திராவகம்

- நெல்லிக்காய்
- கடுக்காய்
- தானூறிக்காய்

வகைக்கு 1 சேர் எடுத்துக்கொண்டு திரிகடுகம் சேர்த்து உரலிலிட்டு மூழ்கத் தண்ணீர்விட்டு 30 நாள் ஊறவைத்தும் பின்வாலுக்கையில் ஏற்றி திராவகம் இறக்கி ஆறுநாள் உட்கொள்ள சிலேத்துமத்தால் உண்டான காசம் போகும்.

(யாகோபு வைத்திய சிந்தாமணி-700, பக்கம் 66)

9) அஷ்டகுன்மத்திற்கு மருந்து

அளவு : தூதுவளங்காய் - 1 மண்டலம்
தீரும் நோய்கள் : 8 வகை குன்மம், வயிற்றுவலி, புரட்டல், வாந்தி
குணமாகும். கண் ஒளி உண்டாகும்.

(தன்வந்திரி வைத்தியம் -1000, பக்கம் 137)

10) முறைசுரத்திற்கு கியாமம்

- திராட்சை
- பேய்ப்புடல்
- தானூறிக்காய்
- கடுக்காய்
- நெல்லிவற்றல்
- வேம்பு
- ஆடாதோடை

செய்முறை

இவைகளை ஒன்று சேர்த்து கியாமம் வைத்து கொடுத்து வந்தால் முறைக்காய்ச்சல் நீங்கும்.

(அனுபவ வைத்திய தேவ ரகசியம் - பக்கம் 289)

11) குல்மாவர ரசம்

குன்றியளவு மாத்திரைகளைச் செய்து சாப்பிட்டு வெந்நீர் குடித்தால் "குன்ம ரோகம்" நிவர்த்தியாகும்.

(அனுபவ வைத்திய தேவ ரகசியம் - பக்கம் 219)

12) In cases of common fever with body ache

- The young root, stem, bark, leaves and fruits (10g each) of Neem (*Azadirachta indica*) are mixed with
- 30 gm ginger and
- 30 gm Triphala (a preparation obtained from the fruits of *Terminalia bellerica*, *Terminalia chebula*, *Emblica officinalis*) and ground.
- to make a fine powder
- of this a dose of 5 gm is taken with lukewarm water thrice daily for 5 days continuously.

13) For treating old whooping cough

Equal parts of root of *Solanum surattense*, bark of *Ailanthus excelsa*, Bark of *Terminalia bellerica* are dried ground and made into powder. Dosage -2gm once daily for 7 days with luke warm water.

14) For pain in chest muscles and congestion by cough

Seeds removed fruits of *Terminalia bellerica*, bark of *Ailanthus excelsa* are mixed in equal quantity and roasted, then ground and made into powder.

Dosage : 3 gm with water for 3-4 days once daily
(Medicinal plants and Folklores by V.K. Singh and Abrar M. Khan, page 45 & 138)

MATERIALS AND METHODS

Drug Selection

In this dissertaion, thandrikkai chooranam (*Terminalia bellerica*) was taken as a single drug. The reference is found in Gunapadum Mooligai Vagupu, page No. 512, by Murugesha Muthalilar.

Collection of the test drug

Dried thandrikkai thol were collected from the raw drug store(Pharmacy), Govt. Siddha Medical College, Palayamkottai and identified by P.G.Gunapadam staff's.

Preparation of the test drug

After collection, it was cleaned thoroughly with fresh water and dried completely under the sunshade for 3-5 days. The dried thandrikkai thol are made into a fine powder and filterated by white cloth(vasthirakayam)

Purification of the test drug

Thandrikkai chooranam was moistured with cow milk. A clay pot is taken and is fixed with equal parts of milk and water. A white cotton cloth is tied tight around the mouth of the pot. The moistured chooranam is placed over the cloth. Then the contents were boiled till the chooranam was fully cooked, than it was taken and dried in sun heat.

Route of administration

Oral route

Dose

One gram thrice a day after meals

Anupanam

Luke warm water

Indication

Azhal keel vayu (osteo arthritis)

அனுபானங்கள்

”அனுபானத்தாலே யவிழ்தும் பலிக்கும்
இனிதான சுக்கு கன்னலிஞ்சி பினுமுதகங்
கோமயம் பால் முலைப்பால் கோநெய்தேன் வெற்றிலை நீர்
ஆமிதையா ராய்ந்து செய்யலாம்”

அனுபானங்களில் சேர்கையாலேதான் அவிழ்தங்கள் நோய் நீக்கும் ஆற்றலை பெறுகின்றன. அவை பல வகைப்படும். அவைகளில் ஒன்று வெந்நீரும் ஆகும்.

(தேரையர் வெண்பா, பக்கம் 210)

அனுபான பெருமை

”அனுபானத்தாலே யவிழ்தங்கட் காண்மை
கனமாகு மென்மை யெல்லாங் காட்டும் - இனமான
பேதாபே தங்களெல்லாம் பேதித் தறிந்தவரே
நாதாக்க ளென்று மறை நூல்”

அவிழ்தங்களுக்கு ஆற்றலை தருவன, அவற்றை உபயோகிக்க துணையாவதும் அனுபானங்களே, அதற்கு தக்க பெருமையும், மேன்மையும் உடையது.

(தேரையர் வெண்பா, பக்கம் 158)

BIO - CHEMICAL ANALYSIS OF THANDRIKKAI CHOORANAM

Preparation of the Extract :

5grams of **Thandrikkai Chooranam** was weighed accurately and placed in a 250ml clean beaker. Then 50ml distilled water is added and dissolved well. Then it is boiled well for about 10 minutes. It was cooled and filtered in a 100ml volumetric flask and then it is made up to 100ml with distilled water. This fluid is taken for analysis

QUALITATIVE ANALYSIS

S.No	Experiment	Observation	Inference
1.	Test for calcium 2ml of the above prepared extract is taken in a clean test tube. To this add 2 ml of 4% ammonium oxalate solution.	No white precipitate is formed	Absence of calcium
2.	Test for sulphate 2ml of the extract is added to 5% barium chloride solution.	No white precipitate is formed	Absence of sulphate
3.	Test for chloride The extract is treated with silver nitrate solution.	No white precipitate is formed	Absence of chloride
4.	Test for carbonate The substance is treated with concentrated Hcl.	No brisk effervescence	Absence of carbonate
5.	Test for Starch The extract is added with weak iodine solution.	No blue colour is formed	Absence of starch
6.	Test for iron Ferric The extract is treated with concentrated glacial acetic acid and potassium ferro cyanide.	No blue colour is formed	Absence of ferric iron
7.	Test of iron Ferrous The extract is treated with concentrated Nitric acid and ammonium thio cynate.	Blood red colour is formed	Indicates the Presence of Ferrousiron

8.	Test for phosphate The extract is treated with ammonium molybdate and concentrated nitric acid.	No yellow precipitate is formed	Absence of phosphate
9.	Test for albumin The extract is treated with Esbach's reagent.	No yellow precipitate is formed	Absence of albumin
10,	Test for Tannic acid The extract is treated with ferric chloride reagent.	blue black precipitate is formed	Indicates the presence of tannic acid
11.	Test for unsaturation Potassium permanganate solution is added to the extract.	It gets decolourised	Indicates the presence of unsaturated compound
12.	Test for the reducing sugar 5ml of benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8-10 drops of the extract and again boil it for 2 mts.	Colour change occurs	Indicates the presence of reducing sugar
13.	Test for amino acid One or two drops of the extract is placed on a filter paper and dried # well. After drying, 1% ninhydrin is sprayed over the same and dried well.	Violet colour is formed	Indicates the presence of amino acids

INFERENCE

The given sample of **Thandrikkai Chooranam** contain **Ferrous iron, Tannic acid unsaturated compound, amino acids and reducing sugar.**

PHARMACOLOGICAL STUDIES
ANALGESIC STUDY OF THANDRIKKAI CHOORANAM
ON ALBINO RATS BY TAIL-FLICK METHOD

AIM

To study the analgesic effect of **Thandrikkai Chooranam** on albino rats by Tail-flick method.

MATERIAL AND METHODS:

PREPARATION OF THE TEST DRUG:

1 gm of **Thandrikkai Chooranam** was suspended in 10ml of distilled water using as suspending agent. This 1ml contains 100mg of the test drug.

INSTRUMENT:

Hot water bath maintained at $55^{\circ}\text{C} + 0.5^{\circ}\text{C}$ was used as the source of stimulus.

PROCEDURE:

Healthy albino rats weighing 100-200gms of both sexes were selected. The tail of each rat was dipped in the hot water bath and time taken for the rat to remove the tail from the water bath was noted. The rats that take more than 5 seconds to remove the tail are excluded from the equipment. Then the rats were divided into 3 equal groups, each group having 2 rats. The first group was given the solvent used to suspend the drug and kept as untreated control. The second group was given the standard drug and kept as treated control. The third group was given the test drug 200mg/100gm, 1/2 hr and 1hr after drug administration the rats are again tested by dipping the tail in the hot water bath. The time taken for the rat to remove the tail was noted as done initially.

The result of control group standard group and treated group were tabulated and compound.

ANALGESIC EFFECT OF THANDRIKKAI CHOORANAM

Serial No.	Name of Drugs / Groups	Dose / 100 gram body weight	Initial Reading	After Drug Administration			Mean
				½ hr. Average	1hr. Average	1 ½ hr. Average	Difference
1	Control	2ml	2.5secs	2.5secs	2.5secs	2.5secs	2.5sec
2	Standard Paracetamol	20mg	2.5secs	3.5secs	5.0secs	6.0secs	6.5secs
3.	Test Drug Thandrikkai Chooranam	200mg	2.5secs	2.5 secs	4.0secs	5.0secs	5.0 sees

INFERENCE

The test drug **Thandrikkai Chooranam** has **got significant Analgesic Activity.**

ACUTE ANTI-INFLAMMATORY STUDIES CARRAGEENIN INDUCED HINDPAW OEDEMA METHOD

METHOD:

Carrageenin induced Hind paw edema method in Albino rats.

AIM:

To evaluate the acute anti - inflammatory effect of **Thandrikkai Chooranam** by carrageenin induced oedema method in albino rats.

DRUG PREPARATION

1 gm of **Thandrikkai Chooranam** was suspended in 10ml of distilled water using as suspending agent. This 1ml contains 100 mg of the test drug.

PROCEDURE

Six healthy albino rats of either sex weighing between 100-120gm were selected. The volume of each hind paw was measured by using the mercury plethysmograph.

After the measurement of hindpaw of all the rats, they were divided into three groups each containing two rats.

First group was kept as control by giving distilled water of 2ml/100mg of body weight. The second group was given ibuprofen 20mg/100gm body weight and kept as standard. Third group was given test drug **Thandrikkai Chooranam** 200mg/100gm body weight.

The drugs were administered orally, one hour after drug administration, 0,1ml 1% (W/V) of carrageenin suspension in water was injected in the plantar surface of hind paw of rats.

All the animals were given carrageenin injection subcutaneously. Three hour after carrageenin injection, the hindpaw volume was measured from the differences in the initial and final hind paw volume, the degree of the inflammation was calculated by taking the volume in the untreated control group as 100%.

The percentage of inflammation of the other group was calculated from the degree of anti - inflammatory effect of the treated and the test groups were calculated.

RESULTS

The details of the experiment results are shown in the table

ACUTE ANTI INFLAMMATORY EFFECT OF THANDRIKKAI CHOORANAM

Group	Drug	Dose 100gm of body weight	Initial Reading average	Final reading average	Mean difference	Percentage inflammation	Percentage inhibition
Control	Water	2ml	0.55	1.40	0.85	100	-
Standard	Ibuprofen	20mg	0.55	0.85	0.3	35.2	64.8
Test Drug	Thandrikkai Chooranam	200mg	0.87	1.15	0.28	32.9	67.9

INFERENCE:

Thus **Thandrikkai Chooranam** has got significant acute anti inflammatory effect.

CHRONIC ANTI - INFLAMMATORY EFFECT OF THANDRIKKAI CHOORANAM IN RATS BY COTTON PELLETS GRANULOMA METHOD

AIM:

Chronic Anti - Inflammatory effect of **Thandrikkai Chooranam** .

DRUG PREPARATION:

1 gm of **Thandrikkai Chooranam** was suspended in 10ml of distilled water. This 1ml contains 100mg of the test drug.

PROCEDURE:

Six healthy albino rats weighing 100 - 150gms were taken and divided in to three groups, each consisting of two rats.

In this procedure, the drugs were given daily for 7 days. Before giving the drug cotton pellets each weighing 10mg were prepared and sterilised in the autoclave for about 1 hr under 15Hg atmospheric pressures on the day of experiment, each rat was anaesthetised with ether to implant 10mg of sterilised cotton pellets subcutaneous in the lower abdomen two on each side after making suitable incision and sutured carefully.

First group was kept as control by giving distilled water of 2ml/100gm of body weight. To the second group, the standard drug Ibuprofen in a dose of 20mg/100gm body weight was given. The third group of animals was given tested drug **Thandrikkai Chooranam** in a dose of 200mg/100gm of body weight. On the 8th day of the experiment, all the rats were sacrificed and cotton pellets

found to be surrounded by granulation tissue were removed and dried in hot air Oven un at 55°C -60°C.

The average weight of granuloma of control group and treated group gives an estimation of degree of Inhibitory activity of test drug.

RESULTS

The details of the experiment result are shown in the table.

CHRONIC ANTI INFLAMMATORY EFFECT OF THANDRIKKAI CHOORANAM

Sl.no	Group	Dose/100gm of body weight	Cotton Pellet weight	Pellet weight to the Granuloma of drugs	Percentage of Inflammation	Percentage of Inhibition
1	Control (water)	1ml	10mg	250mg	100	-
2	Standard (Ibuprofen)	20mg	10mg	55mg	22	78
3	Test drug Thandrikkai Chooranam	200 mg	10mg	120mg	48	52

INFERENCE

The test drug **Thandrikkai Chooranam** has **got significant chronic anti- inflammatory Effect.**

ANTIPYRETIC STUDY OF THANDRIKKAI CHOORANAM IN YEAST INDUCED HYPER PYREXIA ALBINO RATS

The test drug **Thandrikkai Chooranam** was screened for its antipyretic activity with the help of yeast induced hyperpyrexia albino rats.

AIM:

To evaluate antipyretic activity of **Thandrikkai Chooranam** .

PREPARATION OF THE TEST DRUG:

1 gm of **Thandrikkai Chooranam** was dissolved in 10ml of water. 1ml of this preparation contains 100mg of the test drug.

YEAST INDUCED HYPERPYREXIA:

Six healthy albino rats of either sex, weighing between 80-100gm were selected. They were divided into 3 groups of 2 rats in each group. All the rats were made hyperthermic by giving subcutaneous injection of 12% of yeast in distilled water 1ml/100 gm of body weight.

After 10 hours, the initial temperature (0 hr) was taken for all the rats. First group of rats were given 2ml of water and kept as control. The second group received 20mg/100gm of body weight of Paracetamol and the third one received the test drug **Thandrikkai Chooranam** 200mg/100gm body weight.

The mean rectal temperatures for all the rats were recorded at 1 1/2 hr, 3hr, and 4 1/2 hours after the drug administration.

The difference between the 3 groups are measured and compared.

RESULTS :

The details of the experiment and the results were shown in the table.

ANTIPYRETIC EFFECT OF THANDRIKKAI CHOORANAM :

Serial No.	Name of Drug / Groups	Dose / 100 gm body weight	Initial Temperature in centigrade	After Drug Administration			Remarks	
				1 ½ hour	3.0 hour	4 ½ hour		
1 .	Control (Water)	1ml	36.0 37.0	36.0 37.0	36.0 36.0	37.0 39.0	38.0	-
2.	Standard (Paracetamol)	20mg	37.0 38.0	37.0 37.0	36.5 36.5	35.0 34.0	34.5	-
3.	Thandrikkai Chooranam	200mg	36.0 37.0	36.0 37.0	35.5 36.5	35.0 36.0	35.5	-

INFERENCE

The test drug **Thandrikkai Chooranam** has got significant **anti pyretic activity**

ANTIMICROBIAL ACTIVITY OF THANDRIKKAI CHLOORANAM BY KIRBY BAUER METHOD

AIM:

To determine the Antimicrobial activity of **Thandrikkai Chooranam**.

Components of medium:

Beef extract	:	300gms/lit
Agar	:	17gms/lit
Starch	:	1.5gms/lit
Casein hydroxylate	:	17.5gms/lit
Distilled water	:	100ml
pH	:	7.6

Procedure :

The method of antimicrobial activity study is **disc diffusion method**. The principle of antibiotic sensitivity test is simple. Antibiotic discs are prepared with known concentration of the drug (1gm in 10 ml of distilled water) and placed on agar plates that has been inoculated with the test organism. The antibiotic diffuses through the agar producing an antibiotic concentration. Gradient effectiveness of susceptibility is proportional to the diameter of the inhibitory zone around the disc organism which grows upto the edge of the disc are resistant.

The recommended medium in this method is Muller Hinton Agar, its pH should be between 7.2 – 7.4 and should be poured to uniform thickness of 4mm in the Petri plate (25 ml) for certain fastidious microorganism.

Methodology:

- ⇒ Muller Hinton Agar plates are prepared and pseudomonas, vibrio cholerae, E.coli, Bacillus, Klebsiella, Micrococcus, Streptococcus, is inoculated separately.
- ⇒ The prepared discs of antibiotics **Thandrikkai Chooranam**. are placed over the incubated plate using sterile forceps and incubated for 24 hours at 37⁰ Celsius.
- ⇒ The plates after 24 hours incubation are observed for the zone of inhibition.

Result:

The diameter of zone of inhibition **Thandrikkai Chooranam** as

Styphylo coccus aureus - 14 mm
Candida albicans - 12 mm

KIRBY BAUER ANTIMICROBIAL SUSCEPTIBILITY METHOD

S.No.	Test Drug	Organisms (cultures)	Susceptibility	Zone size (mm)
1.	Thandrikkai Chooranam	Escherichia coli	Resistance	14 mm
2.		Klebsiella	Resistance	
3.		Proteus	Resistance	
4.		Styphylo coccus aureus	Sensitivity	
5.		Strepto coccus pneumoniae	Resistance	
6.		Pseudomonas aeroginosa	Resistance	12 mm
7.		Candida albicans	Sensitivity	

ANTIMICROBIAL ACTIVITY OF TERMINALIA BELLERICA

ABSTRACT

The antimicrobial activity of crude and methanol extract of *Terminalia bellerica* dry fruit was tested by disc diffusion method, against 9 human microbial pathogens. Crude aqueous extract of dry fruit at 4 mg concentration showed zone of inhibition ranging from 15.5 – 28.0 mm. *S. aureus* was found to be highly susceptible forming highest zone of inhibition, suggesting that *T. bellerica* was strongly inhibitory towards this organism. These pathogens were highly sensitive to the methanol extract forming 14.0 to 30.0 mm zone of inhibition suggesting that the methanol extract of *T. bellerica* was more effective than crude extract against most of the microbes tested except *E. Coli* (Enteropathogen) and *P. aeruginosa*. The minimal inhibitory concentrations (MICS) of crude and methanol extracts were determined by broth dilution technique which ranged from 300 to > 2400 g/ml and 2500 g to > 2000 g/ml respectively, indicating that *T. bellerica* was highly effective against *S. aureus* with lower MIC values. There were some biochemical alterations induced by *T. bellerica*. These results indicate that *T. bellerica* dry fruit possesses potential broad spectrum antimicrobial activity.

- Indian Journal of Clinical Biochemistry, 2005, 20 (2) 150 – 153,
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Institute of Technology and Management Visakapatnam – 530 045

CLINICAL ASSESSMENT

Azhal keel vayu is a disease mainly affecting the major weight bearing joints. Normally, there is a change in the joint at certain age group. It affects the knee joint, which do a lot of functions like flexion, extension etc.,

In order to assess the efficacy of the thandrikkai chooranam for Azhal keel vayu a clinical trial was taken on 40 cases of different age in both sexes.

They were clinically diagnosed as Azhal keel vayu, according to the selection criteria and siddha literatures. Among them 32 patients were treated in out-patient department and 8 patients were treated in In-patient department.

Immediately after the admission, full clinical data were recorded and diagnosis was done on the basis siddha principles such as Envagai thervu, Mukkutram etc., The admitted patients had different signs and symptoms of varying severity.

The routine blood investigations were done in each case, Radiological investigations were also carried out. Radiological investigations were mainly used to rule out the disease, osteoarthritis and also other causes and diseases.

The cases were screened as per the following criteries and selected from the out-patient and In-patient P.G. Gunapadam, Department of the G.S.M.C.H, Palayamkottai.

Including Criteria for case selection

- Age group : Above 40 years
- Pain in major joints (Knee joints)
- Swelling
- Morning stiffness
- Limitation of Movements
- Crepitation of the joints
- Aggravated pain during walking, sitting and squatting position
- obese
- Restricted movements
- X-Ray finding

Signs and symptoms vary in severity from patient to patient.

Excluding criteria

- Sudden onset of excruciating pain, marked swelling and redness of the big toe.
- Age group : Younger age group below 30 years
- Raised level of uric acid
- Involvement of smaller joints
- Migrating joint pain
- Mantoux test positive and sputum AFB positive
- RA factor positive
- STS positive
- Raised E.S.R.
- Haemorrhagic effusion
- Osteoporosis
- Osteosarcoma
- Traumatic cause
- Osteomyelitis
- Psoriatic arthritis

Diet and Advise

- 1) The patients were advised to take easily digestible foods like rice kanje, bread etc.
- 2) To avoid tamarinds
- 3) To avoid vayu patharthams like potato, dal, unripened banana and sour items viz., curd and tomato etc.,
- 4) To avoid cold, damp climate
- 5) To avoid prolonged standing and walking
- 6) Avoidance of stress
- 7) To avoid pungent, bitter tastes.
- 8) Obese patients were advised to reduce their body weight in order to avoid stress.
- 9) Advise to do quadriceps exercise.
- 10) Advise to change their occupation.
- 11) Advise to take rest but prolonged immobilization should be avoided as it leads to the stiffness of the joint further incapacitating the patient.

Drug and Dosage

The test drug 'Thandrikkai chooranam' was given to the patients at a dose of 1 gm. Three times a day with lukewarm water as the vehicle. The drug was given for a maximum of 48 days. The drug was well accepted by all the patients. During drug administration, no adverse reactions were noted.

Observation

Routine investigations were done before and after treatment. Radiological investigations were also done before and after treatment. If a patient complained of any other complaints during the treatment period they were treated with other Siddha medicines. For both outpatients and inpatients, time was noted, for walking to a distance of 100 feet, on admission and after treatment.

The results were assessed on the basis of the symptomatic relief obtained by the patients and by clinical examinations daily in In-patient department and once in three days in out patient department.

In the study of 40 patients, 20 were males and the remaining 20 were females. Almost all the patients were laboures and farmers of poor socio economic status.

Drug response

The course of treatment varied from 25-48 days. Most of the patients got no improvement with in 3 days. Mostly pain and stiffness were relieved from 5th-9th day of treatment and other symptoms subsided and relieved simultaneously during the further course of treatment.

28 cases had good response, 8 cases had fair response and 4 cases showed no response.

Clinical assessments of Azhal keel vayu are tabulated in the following tabular columns.

Tabulation showing (Age wise / Sexwise)

Distribution of Patients

Sl.No	Age in Years	Sex		Total
		Male	Female	
1)	40 - 49	2	5	7
2)	50 -59	7	8	15
3)	60 - 69	9	6	15
4)	70 - 79	2	1	3
	Total	20	20	40

Tabulation of Results

Result	No. of Patients	Percentage
Complete Relief	28	70%
Partial Relief	8	20%
No. Relief	4	10%
Total	40	100%

Of 40 cases, 70% cases had significantly relief of symptoms, 20% of cases respond moderately and 10% of cases respond poorly.

In this study, it was found that the test drug. 'Thandrikkai chooranam' possesses effective anti-inflammatory, analgesic action there by reducing pain and swelling which was found clinically. Radiological findings revealed a marked reduction in the inflammation of soft tissue of the affected joints.

BIO – STATISTICAL ANALYSIS

Study on the effects of **Thandrikkai Chooranam** incurring of Azhal keel vayu

Description of clinical trials

The clinical trials which were given **Thandrikkai Chooranam** were analyzed and described according to their sex and age.

Table - 1 Age and sex wise distribution of study subjects

S.No	Age group in years	Male		Female		Total	
		No	%	No	%	No	%
1.	40-49	2	5	5	12.5	7	17.5
2.	50- 59	7	17.5	8	20	15	37.5
3.	60- 69	9	22.5	6	15	15	37.5
4.	70- 79	2	5	1	2.5	3	7.5
	Total	20	50	20	50	40	100
	Mean age	59.9		56.9		58.2	
	Standard deviation	8.9		9.2		9.1	
	‘t’	0.732					
	Significance	P>0.05					

The above table- 1 describes the age and sex of the study subjects. The males participation was 50 % and the female was 50%. The mean age of male was 59.9 ±8.9 and female mean age was 56.9±9.2. The age and sex wise difference was not statistically highly significant (t=0.732, d.f. =38, P>0.05)

The total study subjects was 58.2 ± 9.1 and the estimation population mean at 95% confidence interval was between 50 to 59 years.

Effectiveness of the drug Thandrikkai Chooranam:

The effectiveness of the drug was analyzed and interpreted by calculating mean and standard deviation of the variables leg pain , stiffness, measurement , tenderness, swelling and duration of 100 feet walk. The above variables were recorded before administration of the drug and after administration of the drug. The mean and s.d of the all variables were calculated for both time (before and after) and compared. The results are available the below table.

Table 2. Standard deviation of the variable symptoms

S.No	Variable symptoms	N	Leg	Before		After		Mean difference	“t”	Significance
				Mean	S.D	Mean	S.D			
1.	Pain	40	Right	1.875	0.9	0.35	0.7	1.525	9.774	P<0.001
			Left	1.8	0.8	0.25	0.7	1.55	11.196	P<0.001
2.	Stiffness	40	Right	0.925	0.5	0.125	0.4	0.8	8.973	P<0.001
			Left	0.9	0.4	0.100	0.3	0.8	10.902	P<0.001
3.	Measurement	40	Right	38.175	1.96	37.675	1.9	0.5	4.416	P<0.001
			Left	38.3	1.9	37.675	1.8	0.5875	8.505	P<0.001
4.	Tenderness	40	Right	0.675	0.5	0.1	0.4	0.575	7.264	P<0.001
			Left	0.575	0.5	0.025	0.2	0.55	6.904	P<0.001
5.	Swelling	40	Right	1.225	0.9	0.1	0.4	1.125	8.652	P<0.001
			Left	1.125	0.8	0.075	0.3	1.05	8.483	P<0.001
6.	Time for 100 feet	40		63.95	5.3	55.3	6.3	8.65	15.142	P<0.001

The above table- 2 shows that the comparison of symptoms before and after administration of the drug. The pain in the right and left legs before treatment were 1.375 ± 0.9 and 1.8 ± 0.8 and the same in the after treatment were 0.35 ± 0.7 and 0.25 ± 0.7 respectively. The differences of the pain before and after in the right and left legs were 1.525 and 1.55 and the differences were statistically highly significant. (Right- $t = 9.774$, d.f= 39& $P < 0.001$,

Left- $t = 1.196$, $d.f = 39$ and $P < 0.001$). the stiffness on the right leg was 0.925 ± 0.5 and 0.125 ± 0.4 before and after respectively. In the left leg, the stiffness was 0.9 ± 0.4 and 0.1 ± 0.3 before and after respectively. The mean reduction of stiffness in both legs was 0.8 and the differences were statistically highly significant Right - $t = 8.973$, $d.f = 39$ & $P < 0.001$, Left- $t = 10.902$, $d.f = 39$ and $P = 0.001$). the mean measurement in the right leg before treatment was 37.675 ± 1.9 . the reduction of measurement 0.5 c.m in the right leg was statistically significant($t = 4.416$, $d.f = 39$, and $P < 0.001$). similarly, the measurement in the left leg was also reduced as 0.6 c.m. this mean reduction of measurement was also statistically significant($t = 8.505$, $d.f = 39$ and $P < 0.001$). similarly, the measurement in the left leg was also reduced as 0.6 c.m. this mean reduction of measurement was also statistically significant($t = 8.505$, $d.f = 39$ and $P < 0.001$). The reduction of tenderness in both legs were 0.575 in right and 0.55 in left. The differential statistics of tenderness were in right leg($t = 7.264$, $d.f = 39$, and $P < 0.001$) and in left($t = 6.904$, $d.f = 39$ and $P < 0.001$). the swelling of both legs were considerably reduced in the right leg as 1.125 ($t = 8.652$, $d.f = 39$, and $P < 0.001$) and left leg as 1.05 ($t = 8.483$, $d.f = 39$, and $P < 0.001$). the mean 100 feet walking distance before treatment was 63.95 ± 5.3 seconds. The mean reduction of 8.65 seconds were statistically highly significant ($t = 15.142$, $d.f = 39$, and $P < 0.001$). the considerable and statistically highly significant reduction of pain, stiffness, measurement, tenderness, swelling and 100 feet walking time before were proving the effectiveness of **Thandrikkai Chooranam**.

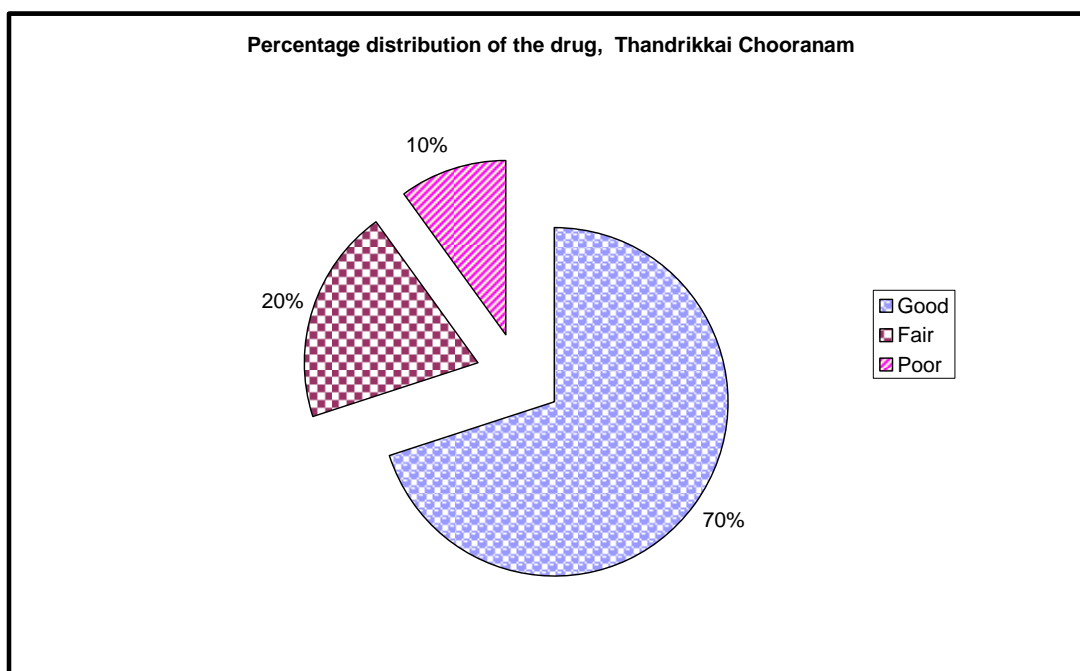
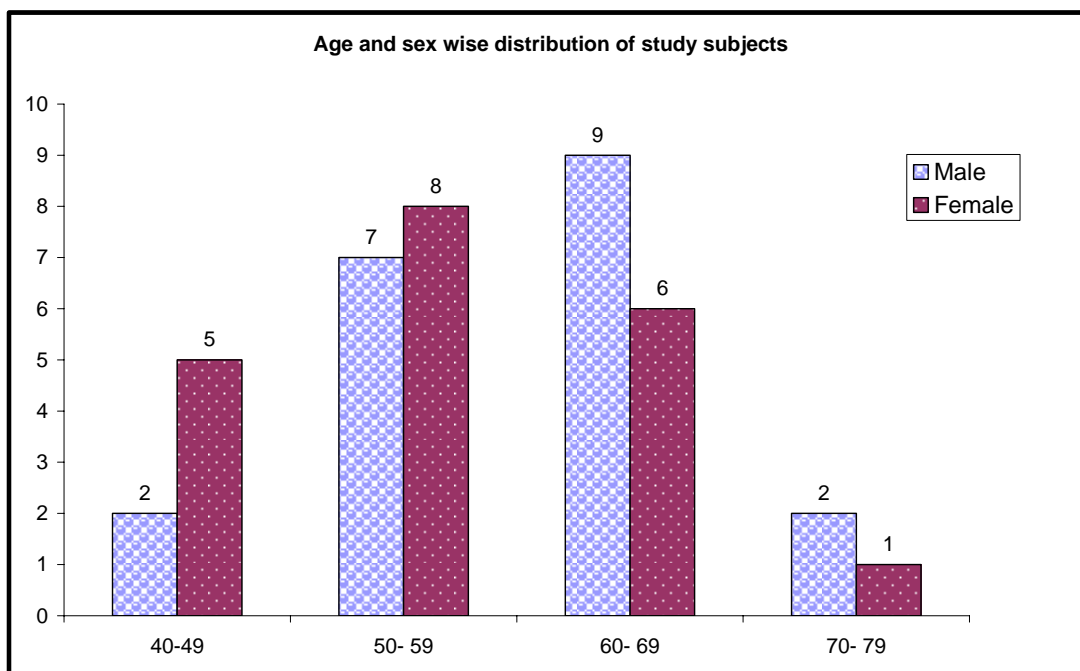
Response of the drug :

The response of the drug was studied by prognosis as good, fair and poor. The percentage of above 3 categories were given in the below table-4

**Table : 3. Percentage distribution of the drug,
Thandrikkai Chooranam**

S.NO	Prognosis	Study subject	
		NO	%
1.	Good	28	70
2.	Fair	8	20
3.	Poor	4	10
	Total	40	100

The above table – 3 shows that the prognosis analysis of the patients response of the drug. The prognosis analytical statistics had showed as good response on 70% of the elements of the drug. The 20% and 10 % had shown fair and poor response respectively. From the above results and discussion of the study of Thandrikkai Chooranam, the hypothesis of that drug was effective in curing “Azhal keel vayu” was statistically proved and accepted.



DISCUSSION

The drug thandrikkai chooranam was taken for dissertation work to establish its efficacy in the disease of 'Azhal keel vayu'.

Siddhars had discovered the medicinal values of herbs through knowledge and expressed them in their literatures. The medical men have practiced these since time immemorial.

The drug has an astringent taste which is attributed to the mixture of mann bootham and vayu bootham.

The bones are a part of Man bootham and also. The vayu bootham is an integral part of the bones. In Azhal keel vayu, bones are involved under the degenerative processing. At the time, the normal activities of bones are restricted. When the drug was given to the patients that supported in improving normal activities of bones.

According to this poem as 'புளிதுவர் விஞ்சில் பூரிக்கும் வாதம்' Astringent increases the Vadham. Although, the drug also has laxative principle which reduces the vadham.

Astringent's purify the blood and also heal the wounds. According to this base, when we see, the drug containing **Gallic acid**, has an **anti-inflammatory** and **analgesic activities**, because Gallic acid has these principle.

Another one literature evidence of this drug, for dissolving the Vadha disease is, it is a poem which expressed the common character's of Thandri, obtained from Gunapedum Mooligai Vaguphu, Page No. 513, following as.

‘ஆணிப்பொன் மேனிக் கழகும் ஒளியுமிகும்
கோணிக்கொள் வாதபித்தக் கொள்கைபோம் - தானிக்காய்
கொண்டவர்க்கு மேகமறும் கூறா அனற்றணியும்
கண்டவர்க்கு வாதம்போம் காண்’

From above that poem, the drug is having reducing property against the vadham.

Biochemical analysis showed that the drug contains ferrous iron, unsaturated compound, Tannic acid, reducing sugar, and Amino acid.

Pharmacological studies of the drug revealed that the drug possessed. significant acute anti-inflammatory and significant chronic anti – inflammatory and significant analgesic action.

The therapeutic efficacy of Thandrikkai Chooranam in the disease of Azhal Keel vayu revealed by exploring pharmacological actions like significant Anti-inflammatory and significant analgesic. It helps to relive pain (Analgesic) and reduce the inflammation(Anti – inflammatory) in soft tissues.

In the anti-microbial studies, the drug is sensitive to Styphylo coccus aureus and Candida albicans.

In clinical studies, patients were diagnosed as Azhal Keel vayu accordingly to Siddha aspect as well as by radiological and other investigations they were studied at In-patient ward and out patient ward of P.G. Gunapadam, Department of GSMC Hospital, Palayamkottai. The course of treatment varied from 25-48 days. Out of 40 cases, 28 patients had good relief from signs and symptoms 8 patients had partial relief and 4 patients had no relief.

Biostatistical analysis revealed that the drug was effective incurring 'Azhah keel vayu' was statistically proved and accepted.

No adverse effect was observed during the course of treatment and after withdrawal of the drug.

SUMMARY

Botanical aspects showed the identification description and chemical constituents of the plant. From the Gunapadam aspects, journals abstracts and other literatures surveys the author had an idea about the therapeutic efficacy. The dose of Thandrikkai Chooranam is 1 gram with Luke warm water, thrice a day after meals.

The biochemical analysis revealed that the drug contains ferrous iron unsaturated compound reducing sugar, tannic acid and amino acid only.

Pharmacological analysis showed that the drug possessed significant anti-inflammatory and significant analgesic action. It helps to relieve pain (Analgesic) and reduce action. It helps to reduce the inflammation (Anti-inflammatory) in soft tissues.

In the Anti – microbial studies the drug is sensitive to *Styphylo coccus aureus* and *Candida albicans*.

Clinical studies showed that the drug has got 70% of good response, 20% of fair response and 10% had no response.

Biostatistical analysis showed that the drug was effective incurring 'Azhai keel vayu' was statistically proved and accepted.

No adverse effect is observed during the course of treatment.

CONCLUSION

It is concluded that the drug “**Thandrikkai Chooranam**” is found to be effective form Azhal keel vayu (Osteo arthritis) Clinically and it has got significant anti-inflammatory and significant analgesic effect without causing any adverse effects.

INTRODUCTION

Siddha Medicine is the contemporary edition of the unbroken Medical tradition of Tamil / Dravidians. Siddha medicine is one of the two most ancient medical systems of India. Ayurvedha is the other one. Siddha is the mother Medicine of ancient Tamils / Dravidians of peninsular south India. Before 2000 years, the traditional medical system of the Tamils was known as “Marunthu”. It got the proper name of Siddha medicine in course of time due to the extraordinary contributions made by Siddhars.

The word Siddha means “Established truth”. The Siddha School sought to establish truth in every sphere of knowledge including medicine. The persons who were associated with such a Siddha school of thought were known as ‘Siddhars’.

Siddhars were experts in alchemy. They used their knowledge in chemistry to develop potent herbomineral drugs. Siddha system of medicine contains thousands of herbomineral formulations which are not found in any other Indian System of Medicine.

Siddha drugs are derived from natural sources such as plants, animals and minerals. Plant drugs are its mainstay. The stemming instruction of Siddhars to medical practitioners is to use herbal drugs first in any ailment. If herbal drugs are ineffective then one is advised to go for some potent ‘Chendooram and parpam’ like herbomineral preparations. So Siddha practitioners start their prescription with herbal drugs. Only when they feel that the use of metals and minerals are inevitable for them.

In Siddha literature excellent herbomineral preparations are mentioned for chronic joint diseases. Among them the author has selected ‘Linga Chendooram’ for Azal Keel Vayu.

AIM AND OBJECT

Thadhu's are effectively used as Medicine for many diseases. These are 220 in number totally. Thadhus are further divided into 4, followed as:

1. Ulkogam - 11 (Metals)
2. Karasaram - 25 (Salts)
3. Padaanams - 64 (Arsenic Compounds)
4. Ubharasam - 120 (Mixed originating)

From above these, padaanam are 64 (Sixty four) in number of these, thirty two are naturally occurring padaanams, thirty two are artificial. According to Bohar-7000 Lingam (Mercuric sulphide) is one among the naturally occurring padaanam and saathilingam is one among the artificial padaanam Lingam is one of the "pancha gootham" because it contains Mercury (Sudham)

According to this poem.

‘இங்குலிகச் சரக் கொன்றே சரக்குகளுக்கெல்லமிறையாகும்’

Lingam is a God of thadhu's that impressed the author when he was studying about lingam in the literature of Gunapadum thadhu – Jeevam.

Lingam is a well known documented Anti Vadha drug in Siddha system when going through the literatures it can be noted as an efficient remedy for the same.

So the author of this dissertation decided to study the efficacy of Linga chendhooram (with reference from Anuboha vydhia navanetham – Vol – IV) in Azhal keel vayu (Osteo arthritis) which is

one of the oldest known yet most neglected diseases. Azal keel Vayu live at the lead of the list of chronic disease from the stand point of social and economic importance.

In this dissertation book **Linga Chendooram** is done with view to assess:-

1. What **Siddhar's** have written about Lingam (Literary and Gunapadam)
2. Chemical aspect
3. Bio – Chemical analysis
4. Pharmacological analysis
5. Clinical study of Linga Chendooram on Azal keel kayu

CHEMICAL ASPECT

LINGAM

Chemically Lingam (a Siddha drug) has been identified as cinnabar, the Chief ore of Mercury. Chemically Cinnabar is known as mercuric sulfide or mercury sulfide. It's formula is **HgS**

Occurrence

It occurs in minerable deposits in a very few localities. It is commonly found in veins and impregnations deposited near the surface of recent volcanic rocks and hot springs. It is commonly encountered with pyrite, Marcasite and stibnite.

Locality

Most important deposits are Almaden and Spain and it has been mined for more than 2500 Years from these place. Other localities are India, Italy, China & California of United States.

Appearance

It most commonly occurs in fine granual massive form and impure state. It is adamentive lustre and vermillion red. Pure crystals are transparent to translucent. When it is mixed with clay bitumen and other impurities, It looks like dull and brownish red. The commercially produced cinnabar is shinny red and it is also know as vermillion.

Chemical Name

Natural	-	Cinnabar
Synthetic	-	Vermillion

Scientific Name

- Mercuric sulphide (or) Mercuric II sulphide
- Colour – Cochineal red to brownish red, Lead grey
- Symbol – Hgs

Molecular formula

Molecular weight	-	232.68
Hardness	-	2.5
Specify gravity	-	8
Sublimerat	-	446°C
Crystal Systems	-	Hexagonal or Rhom botedral

Characters

Cinnabar is practically insoluble in water not allowed by HNO_3 or Cold Hcl but decomposed by $\text{Con.H}_2\text{So}_4$ soluble in aquaregia with separation of sulphur and in warm Hcl with evolution of hydrogen sulphate.

Preparation of Cinnabar at Laboratory

One Part of the mercury and four parts of the sulphur are to be placed in an ironpot and heated for sometime. The amalgam is then broken into pieces and put into a glass bottle Previously coated all round with mud and rag one inch deep and dried in shade.

The bottle is heated for five days continuously by means of the fire increasing gradually in intensity at a uniform rate the heating is then discontinued and the contents of the glass bottle taken out on the seventh day. The product will be cinnabar.

Cinnabar have two variety (i) red variety (ii) black variety . Black mercury (iii) sulphide is found in nature in small amounts, with cinnabar as metacinnabarata (black cubic β – Form) a black

apparently amorphous but actually composed of minute regular tetrahedral crystals. Red Variety occurs in red hexagonal α – form crystals this is described as having a deformed sodium chloride structure of hexagonal symmetry.

Red hexagonal HgS = = hexagonal HgO

The two forms are in equilibrium 38.6°C α – form changes fairly rapidly into the β – form when heated above 41°C . but the β form remains unchanged indefinitely grinding the β form produces red cinnabar.

The major differences between metacinnabar and cinnabar

Character	Meta – Cinnabar	Cinnabar
1. Colour	Greyish black	Vermillion red
2. Hardness	3	2.5
3. SP gravity	7.5	8.1

The meta Cinnabar is the natural source of mercury II sulfide black variety. But it can also be synthesized artificially by following methods.

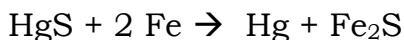
1. Passing hydrogen sulfide (H_2S) gas in to mercurial salt solution
2. Reaction between metallic mercury with sulfur $\text{Hg} + \text{H}_2\text{S} \rightarrow \text{HgS} + 2\text{H}$
 - Conversion of mercury II sulfide (blue) to mercury II sulfite (Red)
 - When the black power of mercury II sulfide is sublimated to 446°C it yields red form of HgS.
 - In ancient period it was prepared by vaidya using Hg and S In 5:1 ratio
 - Cinnabar on heating in a test tube it sublimes and fumes of SO_4 and black mercury sulphide are obtained.

- Cinnabar by heating either in a current of air or with the addition of iron or quick lime. giving or yielding mercury.

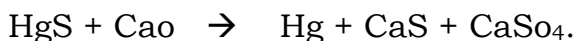
1. when treated with an a current air



2. When treated with iron



3. With quick lime



The following table show the percentage of Hg and S in various samples of cinnabar

No	Area	Hg%	S%
1	Lucknow	84	16
2	Kanpur	85.5	15.5
3	Jansi	85.8	15.2
4.	Pilibhit	84	16
5.	Gorakpur	85.2	14.8
6.	Pachareli	84	15.9
7	Saharanpur	84	16.4

According to report of Dr. Chattergy:-

1. Cinnabar contains 86.22% mercury and 13.78% of sulphur.
2. It is black in acid medium while in renstral medium.
3. Change of red coloured cinnabar power to black in presence of three myrobalans of fruit juice is due it change in pH value.
4. Neutral form of mercuric sulphide is obtained by reacting sublimated mercury and sulphur in kupi pak vs apparatus.

GUNAPADAM ASPECTS

இலிங்கம்

பிறப்பு

பாடாண வகைகளில் ஒன்றான இலிங்கம் சிவன் திரிபுரத்தை எரித்தபோது உண்டான நெற்றிக்கண்ணின் பொறி ரசமிருக்கிற பூமியில் பட்டு உருவானது என்றும் மேருவுக்கு கிழக்கே வங்கம் இருக்கும் மலையின் அடியில் இரசமும் கந்தியும் கூடி உருவானது என்றும் கூறப்பட்டுள்ளது. தற்காலத்தில் வைப்பு பாடாண சரக்காகவே கையாளப்படுகிறது.

- குணபாடம் தாது சீவ வகுப்பு பக்கம் - 200

இலிங்க தோற்றம்

இலிங்கமானது இயற்கையாக பிறப்பதாகவும், செயற்கையாக வைப்பு சரக்காக செய்யப்படுவதாகவும் போகர் - 7000 செய்யுள்கள் தெரிவிக்கின்றன.

“பாடினேன் பிறக்குமுப் பத்திரண்டு ---

தாருமன்ற லிங்கப்பா டாணத்தேகாடு”

என்ற செய்யுளில் இலிங்கம் இயற்கையாக பிறப்பதாக குறிப்பிட்டுள்ளார்.

“தாதுதான் தந்திரமாய் சித்தர் வைத்த

தங்கியென்ற சாதிலிங்கம் கருமுகின்றான்
-----”

என்ற செய்யுள் மூலம் இலிங்கத்தின் செயற்கை வைப்பு முறையை குறிப்பிட்டுள்ளார்

வேறுபெயர்கள்

I. அங்கு, ஆண்குறி, இங்குலிங்கம், இராசம், கடைவன்னிகர்ப்பம், கலிக்கம், காஞ்சனம், காரணம், சண்டகம், சமரசம். சானியம், செந்தூரம், மணிராகம், மிலேச்சம், வனி, வன்னி, குலிகம், மலைராசம்

- குணபாடம் தாதுசீவ வகுப்பு, பக்கம் - 220

இலிங்கத்தின் வேறுபெயர்களுக்கான பெயர்காரணம்:

1. ஆண்குறி:-

சிவன் திரிபுரத்தை எரித்த காலத்தில் நெற்றிக் கண்ணின் பொறி, இரசமிருக்கின்ற பூமியில் பட்டு இலிங்கமாக (ஆண்குறி) உருவெடுத்தது.

2. கடைவன்னி கர்ப்பம்:- (கடை + வன்னி கர்ப்பம்)

கடை - இறுதி (எமன்)
வன்னி கர்ப்பம் - வெப்ப வீரியத்தை உடையது

அரிதில் தீரும் மேக வகை நோய்களுக்கு எமன் போன்றது (அந்நோய்களை குணப்படுத்துவதில்) வெப்ப வீரியத்தை உடைய இலிங்கம்.

3. கலிக்கம்:-

சன்னி மூர்ச்சை முதலிய நோய்கள் தீர்வதற்கு கண்ணுக்கிடும் மருந்தாக இலிங்கம் பயன்படுகிறது.

4. காரணம் (மூலம் - ஆதி)

எல்லா தாதுச் சரக்குகளுக்கும் ஆதியானது இலிங்கம்.

5. சண்டகம்- (பேடி - ஆண்மையின்மை)

அப்பு பூத உறுப்பில் (வெண்ணீர் (ளிநசஅ)) உண்டாகும் நோயினை போக்குவது லிங்கம்

6. சமரசம்- (வித்தியாசமின்மை)

லிங்கம் தோற்றத்தில் பாதரச உருக்காகவும், குணத்தில் இரசகுணத்தையும் பெற்றுள்ளது.

7. இங்குலிகம், குலிகம். செந்தூரம்:-

சிவப்பு மருந்து (சிந்தூரம் எனப்படும் இரசமும், செந்தூரத்தாதி எனப்படும் கந்தகமும் கலந்து இருப்பதால் இலிங்கம் சிவப்பாக காணப்படுகிறது

8. காஞ்சனம்:- (பொன், மஞ்சள்):-

- பொன்வண்ணி எனப்படும் கந்தகத்தை கொண்டது இலிங்கம்.

9. மணிராகம் - மணி + இராகம்

மணி - ஆண்குறியின் நுனி

இராகம் - சிவப்பு

ஆண்குறியின் நுனியை போன்று சிவந்த நிறத்தை உடையது இலிங்கம்.

11. வனி :- (சுரநோய்)

சுரநோயினை போக்குவது இலிங்கம் சன்னி நோயினை போக்கும்.

12. வன்னி : (நெருப்பு, சன்னி)

வெப்ப வீரியத்தை உடைய இலிங்கம் சன்னி நோயினை போக்கும்

II. இலிங்கம், குலிகம் சாதிலிங்கம், மணிவாரி, வன்னிகர்ப்பம், சண்டகம், செந்தூரம், சானியம்

- அனுபோக வைத்திய நவந்தம் - பாகம் -4 பக்கம் - 3

1. சாதிலிங்கம் (சாதி - இனம்)

வைப்புமுறையில் செய்யப்படும் சாதிலிங்கம் இலிங்கத்தின் இனத்தைச் சேர்ந்தது.

III. “வன்னியின் கெர்ப்ப மகத் தானசண்டகன்

கன்னியபெருமான் காரணமாம் லிங்கம்

தன்னிச்சமரசம் சார்வான செந்தூரம்

அன்னிய பிறந்திடும் லிங்கத்தின் பெயரே”

”சண்ட மதாதஞ் சாதிப் பதங்கம்

கண்டம் பவலங்க கடுவன்னி கொற்பந்தான்

இண்டமா மிங்குள மிசைந்த சிவத்தி

பண்டமான் சாதிப் பருலிங்கப் பேருமே”

- சட்டமுனி நிகண்டு — 1200, பக்கம் 53,58

வன்னிகர்ப்பம், சண்டகன், கன்னிய பெருமான், காரணம், சமரசம், செந்தூரம், சண்டம், சாதிப்பதங்கம், கடுவன்னிகர்ப்பம், இங்குளம், சிவத்தி

1. கன்னிய பெருமான் (கன்னி + பெருமான்)

கன்னி - பார்வதி, சக்தி

பெருமான் - சிவன்

சக்தியாகிய கந்தகமும், சிவனாகிய இரசமும், சேர்ந்து இலிங்கம் உண்டானது.

2. இங்குளம், சிவத்தி:- சிவந்த நிறம்

இலிங்கம் சிவந்த நிறத்தை உடையது.

3. சாதிப்பதங்கம்:-

சாதி - இரசம்

பதங்கக் கருவியின் மூலம் இலிங்கத்திலிருந்து இரசம் எடுக்கப்படுகிறது.

IV. குலிகம், சண்டகன். சமரசம், சயந்தமம், சாணம், சாதிப்பதங்கம், இங்குலிகம், செந்தூரம், சோதி, தாரம், திரமம், மணிராக்கம், மாலிங்கம், மிலைச்சம், வன்னியின் கொற்பம், மாவிலிங்கம்.

- பச்சிலை மூலிகை அகராதி பக்கம் - 66 -200

V. அங்கி, இரசலிங்கம். இரத்தபாதம், இங்குலிங்கம், இருலிங்கவட்டி, கண்டம், சாணம்

- வைத்திய மூலிகை அகராதி பக்கம் 5 - 146

VI. "அதீதமென்ற இருலிங்க வட்டி யென்னும் பேரு

அருளான விந்துாகமென்றும் பேரதற்கு

நதீதமென்ற இருக்குமென்றதற்குப் பேரு

நாட்டினோம் கலந்த மென்றும் பேரு"

"ஆதீதமென்ற சாணம் என்றதற்குப் பேரு

வளமான பங்கி என்பதற்குப் பேரு

மதீத மென்ற யங்கி என்றுமதற்குப் பேரு

மகத்தான பேரீதற்கு சாதிலிங்கத்தின் பேரே"

- பஞ்சகாவிய நிகண்டு - பக்கம் 87

இருலிங்கவட்டி, விந்துலகம். சலந்தம், சாணம், பங்கி, அங்கி, நதீதம்

1. விந்துாகம் :

சிவன் விந்து எனப்படும் இரசமும், செல்விவிந்து எனப்படும் கந்தகமும் சேர்ந்து உண்டானது இலிங்கம்.

2. சலந்தம், நதீதம் :

சலம் - நீர் (இரசம்)

நதி - நீர் (இரசம்)

நீர் எனப்படும் இரசத்தை கொண்டுள்ளது இலிங்கம்.

3. சாணம்:- (அம்மிக்கால்)

அம்மிக்கால் வடிவத்தில் உண்டானது இலிங்கம்.

4. அங்கி:- தீ :

தீ (கனல்) - இரசம், வெப்பம்

வெப்ப வீரியத்தை கொண்ட இலிங்கம், இரசத்தை கொண்டுள்ளது.

4. வடமொழி

ஹிங்குளா, தரதா, மிலேச்ச, மணிராகா, அதிரக்தா, கற்கட, சீர்வசோண, பாரஜ, சர்மரஞ்சன, மணிராகா, சரக, அருணா.

- அனுபோக வைத்திய நவநீதம் - பாகம் 4 பக்கம் 3

5. அரபுமொழி

ஜன்ஞ்பர், சஷன்ஜ்ரப், அஸ்ரீகூன், யஹத், சுர்க், ஹிங்கோல், வுன்காப்

- அனுபோக வைத்திய நவநீதம் - பாகம் 4 பக்கம் 3

Vernacular name

Tamil	-	Lingam
Eng	-	Cinnabar
Tel	-	Ingileekam
Can&Kong	-	Ingilika
Malay	-	Chayilyam
urdu	-	Singraff
San	-	Hingula

சுவை:-

வாசனையும் ருசியும் கிடையாது.

வீரியம்

வெப்பம்

- குணபாடம் தாதுசீவ வகுப்பு — பக்கம் - 201

சுவை

துவர்ப்பி

- அனுபவ வைத்திய தேவரகசியம் பக்கம் - 46

Taste

Acrid, bitter

Potence - Hot

Therapeutic actions – Alterative, anti periodic, anti syphilitic

- Indian indigenous drugs and plants – page 680

செய்கை:-

உடல்தேற்றி, வெப்பகற்றி, மேகப்பிணி விலக்கி உரமாக்கி

- குணபாடம் தாதுசீவ வகுப்பு பக்கம் - 201

சுரமகற்றி, துவர்ப்பி, உடற்தேற்றி

- அனுபவ வைத்திய தேவரகசியம்பக்கம் 80

Physical Character

1. கனத்தன்மை உடையது

2. நெருப்பிலிட புகையும்

3. நீரில் கரையும்

- குணபாடம் தாதுசீவ வகுப்பு பக்கம் - 201

பொது குணம்:- வாநசயிநரவதை நகநஉவ

“பேதிசுரஞ் சந்தி பெருவிரண நீரோடுத

காதகடி காசங்கரப்பான் புண் - ணோத

வருவிலிங்க சங்கதமா யூறுகட்டி யும்போம்

குருவிலிங்க சங்கமத்தைக் கொள்”

“ஆதியிரதவுருக் காதலாற் சாதிலிங்க

மோதி விரதகுண முற்றுடலிந் - நீதுவுரி

குட்டங்கிரந்தி கொடுஞ்சுலை வாதமுத

லுட்டங்கு நோய்களை யோட்டும்.

சன்னி, அதிதாகம், கரப்பான், புண், குசஷ்டம், நுணாக்காய்கிரந்தி, வாதநோய்கள், காசம், பேதி இவை தீரும்.

“நிலத்திலெழுந்த பிணி நீங்காக் கிரந்தி

சலத்துடனே சூலைவெடி தானகற்றும் - பலத்ததாம்

சாதிலிங்கத்தின் குணத்தை சாற்றினேன் சன்னிமுதல்

ஓதசுரம் போமே ஒழிந்து”

மண் பூதம் , அப்பு பூத உறுப்புகளில் உண்டாகும் நோய்கள், சன்னி, சுரம், கிரந்தி, சூலை இவை நீங்கும்.

- குணபாடம் தாதுசீவ வகுப்பு பக்கம் - 201

3 சிவந்த இலிங்கம் பலவகை சுரம், அதிசாரம், சந்நிபாதம்

அற்புத புண், அதிமூத்திரம், மண்டல குசஷ்டம், சரீரகுத்தல்

வாதநோய். பாரிசுவாதம் இவைகளை விலக்கும்

- சித்தர்கள் முனிவர்கள் அருளிய நம்நாட்டு வைத்தியம் - பக்கம் 164

4. “இங்கலிகச் சரக்கொன்றே சரக்குக்கெல்லா மிறையாகும்

மேகவகை வினைக்கு நமனான லிங்கம்

மேக நோய்களுக்கு எமன் போன்றது. எல்லாதாதுசரக்குகளுக்கும்

முதன்மையானது.

- குணபாடம் தாதுசீவ வகுப்பு பக்கம் - 201

Varieties

Generally lingam is divided into

1. Natural or red lingam
2. Artificial lingam (Vaippu sarraku)

Natural lingam is classified as

1. Ullantha lingam
2. Rumi Lingam
3. Mathulai Lingam
4. Misri (or) Bombai lingam
5. Cheena (or) Naatu lingam

In general ullantha lingam is available. Rumi lingam is available in Punjab, Kashmir etc.,

Ullantha Lingam

320 grams of Mercury and 106.5 grams of Sulphur

Rumi lingam

Mercury 12 parts Sulphur 8 parts and Manosilai – 5 parts

Mathula Lingam

Equal Parts of Mercury and Thotti padaanamams

Cheena Lingam

Equal parts of Mercury and Sulphur

Bombai Lingam

7 parts of mercury and 1 Parts of sulphur

- அனுபோக வைத்திய நவநீதம், பக்கம் - 5

வைப்புமுறை:

1. சுத்தி செய்த ரசம் 8 பலம், கந்தகம் 2 பலம், வெடியுப்பு 2 பலம், எடுத்து ரசத்தை கந்தகத்துடன் உறவாக்கி வெடியுப்பை கலந்து காசிகுப்பியில் அடைத்து, வாலுகா இயந்திரத்தில் ஏற்றி 6 சாமம் எரித்து ஆறவிட்டு எடுக்க உயர்கம்பி இலிங்கத்தைப் பெறலாம்.

- குணபாடம் தாதுசீவ வகுப்பு பக்கம் - 201

2. இரசம் - 10 பலம்
கந்தகம் - 5 பலம்
அரப்பொடி - 2 பலம்

இவைகளை பழச்சாறு விட்டு அரைத்து குப்பியில் அடைத்து வாலு கா இயந்திரத்தில் ஏற்றி வைரம் பாய்ந்த ஒரே சாதி விறகால் 90 நாழிகை எரிக்க இலிங்கமானது கட்டியாக சிவந்த வர்ணத்தில் காட்சி அளிக்கும்.

- மச்சமுனி பெருநூல் எண்ணூறு பக்கம் - 60

3 பம்பாய் இலிங்க வைப்பு:

சுத்தித்த இரசம் - 7பங்கு

சுத்தித்த கந்தி - 2பங்கு

ஒன்றாய் அரைத்து பளிங்கு குப்பிக்குள் பாதியளவு நிரப்பி, மாக்கல் கொண்டு மூடி ஒரு சீலை மண் செய்து உலர்த்தவும். ஒரு பாணையில் 4 அங்குலம் மணல்போட்டு அதில் குப்பியை வைத்து அதன் கழுத்துவரை மணலைக் கொட்டி சீலைமண் செய்துலர்த்தி 16 சாமம் எரித்து ஆறவிட்டு எடுக்க பம்பாய் இலிங்கம் கிடைக்கும்.

- அனுபோக வைத்திய நவநீதம் பாகம்-5 பக்கம்-4

4. “தானான லிங்கத் தன்மையைக் கேளு
கோனான சூதம் குருவங்கம் ரெண்டும்
ஊனாக வொன்றாயுடன் சேரதில் குரு
தேனான சீனம் சேரதில் பாதியே”

”பாதியைச் சேர்த்து பதிவாய் பொடி செய்து
ஆதியாங் குப்பியிலிதிலிட்டெரித்திடு
நீதியாஞ் சாமம் நினைவா யெரித்திடச்
சோதி போலிங்கஞ் சுந்தர மாமே”

சுந்தரமாகித் துலங்கு மெண்ணூறு
மந்திரந் தன்னை மகத்தான கொங்கணர்
தந்திரமாகத் தன்மனம் நோக்கி
அந்தரந் தன்னிலாதி கண்டானே”

ஆதிச்சரக்கு அறுபத்து நாலும்
வாதிகன் மெச்ச வைத்தனர் கொங்கணர்

நீதிகளோடே நினவறிந் தாக்கல்
சோதித்துரு வந்துலங்வதறியே”

- கொங்கணர் சரக்கு வைப்பு - 100 பக்கம்-32

சுத்திமுறை

1 ”பாரேயோர் கட்டியாய் லிங்கம் வாங்கி
பகரொரு நாள் தேனதிலே யூரப் போட்டு
நேரேதா னதையெடுத்து அமுர்தப் பாலில்
சீரேதான் எலுமிச்சம் பழச்சாரோடு
சிறந்த குப்பை மேனிச்சா ரமுதப்பாலும்
காரேதான் மூன்றையுமே சேர்த்து வைத்து
கருத்தாக அடுப்பிலே சட்டியேத்தி
தாரேலிங்கத்தை சட்டையிலே வைத்து
கடையன்றிப் புகையாமல் சுருக்கு”

தேனில் ஒரு நாளும் முலைப்பாலில் ஒருநாளும் ஊற வைத்து எடுக்கவும்
பின்பு முலைப்பால், எலுமிச்சைப் பழச்சாறு குப்பைமேனிச்சாறு இவை சம
அளவாக எடுத்து லிங்கத்திற்கு சுருக்கு கொடுக்க சுத்தியாகும்.

- சரபேந்திர வைத்தய ரத்னாவளி - பக்கம் - 513

2. அழிஞ்சிற் வேர்பட்டை 1400 கிராம் எடுத்து 4 படி (5.2லி) காடியில் போட்டு
இரவு பனியில் வைத்து மறுநாள் காலையில் நன்றாய் பிசைந்து கலக்கி ஒரு பலம்
(35 கிராம்) இலிங்கத்தை சீலையில் கட்டிப்போட்டு மேல் சட்டி மூடி சீலைமண்
செய்து உலர்த்தி பிறகு பனியில் வைத்தெடுத்து அடுப்பேற்றி 4 சாமம் எரிக்கவும்,
இதே போல புளி கருணை கலந்த காடி நீர் நன்னாரி வேர் கலந்த காடி நீர்
இரண்டிலும் தனித்தனியாக எரிக்க சுத்தியாகும்.

- குணபாடம் தாது சீவ வகுப்பு - பக்கம் - 202

3. ”வேதையென்ற சாதி லிங்க சுத்தி கேளு
மேனிச்சாறு பழச்சாறும் பாலுங் கூட்டி
நீதமுடன் சமபாகமாக விட்டு
லிங்கத்தைச் சுருக்கிடவே சுத்தியாச்சு”

குப்பை மேனிச்சாறு, பழச்சாறு, பால் இவற்றை சமஅளவு கூட்டி, சாதிலிங்கத்திற்கு சுருக்கு கொடுக்க சுத்தியாகும்.

- மச்சமுனி பெருநூல் எண்ணூறு — பக்கம் 97

4. “மாதர் முலைப்பாலதனில் வைத்தூரச் சாதிலிங்கம்
ஏதமுற நாற் சாமமே”

இலிங்கத்தை முலைப்பாலில் 12 மணி நேரம் ஊற வைத்து கழுவி எடுக்க சுத்தியாகும்.

- வைத்திய பெருங்குறள்: பக்கம் - 15

5. “முன்னுசாதி லிங்கந்தன்னை முலைப்பாலி லூற வைத்தே
பின்னொரு நற்பீர்த்தின் பெருங்கணிச் சாற்றில் சுத்தி”

1 நாள் முலைப்பாலிலும், 2ம் நாள் எலுமிச்சை பழச்சாற்றிலும் ஊறவைத்து கழுவி எடுக்க சாதிலிங்கம் சுத்தியாம்.

- யாகோபு வைத்தியம் 300 பக்கம் 57

TOXIC ASPECTS

Lingam is one of the poisonous compound of mercury (i.e) mercuric sulphide (cinnabar) – Artificial preparation occurs as red crystalline powder and is known as vermillion

Signs and symptoms of lingam toxicity:-

Salivation, inflammation of gums and occasionally a blue line at their junction with teeth. Sore mouth and throat, Loosening to teeth Gastro intestinal disturbances, Anaemia, Anorexia an loss of weight.

Gastritis, Glossitis, ulcerative gingivitis, severe abdominal pain, metallic taste with excessive salivation prostration leprosy, impotency, giddiness, derangement of brain

Chronic poisoning:

This may result from

1. Continuous accidental absorption by the workers
2. Excessive therapeutic use
3. From recovery from a large dose.

Fate and excretion

After absorption Mercury iron is distributed between blood cells and plasma. Excretion is by kidneys, liver and colonic mucous membrane. It is also excreted in the saliva, milk, Sweat and faeces.

Fatal dose 1-4gram

Fatal period 3-5days

- The Essentials of forensic medicine and toxicology, Page 48

இலிங்க நஞ்சுக் குறிகுணம்

இலிங்க வேகத்தால் வாயின் அடிப்பாகம், உள்நாக்கு முதல் குரல்வளை வரையிலும், மார்பு, பெருங்குடல், என்னும் இடங்கள் வெந்து பசும் புண்ணாய் வாடிப்போயிருப்பது மன்றி, மேற்படி இடங்கள் காரம் செல்ல வொட்டாதபடி அதிக உபத்திரவத்தைக் கொடுத்துப் போஜனம் செய்ய வொட்டாமலும், தாகத்திற்கு நீரை குடிக்க முடியாமலும் தொந்தரவு உண்டாதல், பேசமுடியாமை, வாய்துர்நாற்றம், அரோசகம், வயிற்றில் அக்கினியாய் எரிதல் போன்றவை காணும்.

நஞ்சுமுறிவு

சாதிக்காய், வால்மிளகு, செம்பருத்தி வேர்பட்டை. கற்கண்டு, வகைக்கு 4கி வீதம் எடுத்து ஒரு புதுப்பாண்டத்திற் போட்டு 1½ ஆழாக்கு நீர்வார்த்து ½ ஆழாக்காக வற்றக் காய்ச்சி குடிநீராக்கி காலை மாலை இருவேளைகள் தவறாமல் 1 மண்டலம் பசித்து வரக் குணமாகும்

- 1 குணபாடம் தாதுசீவ வகுப்பு - பக்கம் 209
- 2 தேரையர் யமக வெண்பா - பக்கம் 208
- 3 நஞ்சுமுறிவு நூல், பக்கம் - 23

2) பருத்தி வேர் கசடியாய் 60.மி.லி இருவேளை/ மண்டலம்

அனுபவ வைத்திய முறை - பாகம்-4 பக்கம்-8

வாதத்திற்கு இலிங்கம் சேரும் மருந்துகள்

1. இலிங்கப்பொடி:

சரக்குகள்:

இலிங்கம் - 5 கிராம்
படிகாரம் - 40 கிராம்

செய்முறை:

படிகாரத்தைக் கரண்டியில் போட்டுக் காய்ச்சி உருகி வரும் போது அதில் இலிங்கத்தைப் போட்டுக் காய்ச்ச வேண்டும். பின்னர் எடுத்துப் பொடித்து கொள்ளவேண்டும்.

அளவு : 65 - 130 மி.கி / 3 - 7 நாட்கள் வரை
துணை மருந்து : தேன்
தீரும் நோய் : வாதசன்னி. வாந்திபேதி,
குறிப்பு : தாகம் எடுத்தால் குளிர்ந்த நீர் தரவும்,
- (சித்த மருத்துவ கைமுறை வைத்தியம் - பக்கம் - 22)

2. இலிங்க செந்தூரம்:

சரக்குகள்:

இலிங்கம் - 1 பலம்
ஆற்றுத்தும்மட்டிச்சாறு - போதுமானளவு

செய்முறை:

சுத்தி செய்த இலிங்கம் 1 பலத்துக்கு, ஆற்றுத்தும்மட்டிச் சமூலச்சாறு சுருக்குக கொடுத்து சுத்த நீரால் கழுவி பொடித்துக் கொண்டு எடுக்கவும்.

அளவு : அரிசி பிரமாணம்.
அனுபானம் : தேன்
தீரும்நோய் : வாதம், கபம், மேகநோய்கள், குளிர்சுரம்,
- (சித்த வைத்திய திரட்டு - பக்கம்- 136)

3. இலிங்க கலிக்கம்:

சரக்குகள்

இலிங்கம்	}	சமவெடை
நாபி		
மிளகு		

4. மகாசாதிலிங்க பற்பக் கோடாரி:

செய்முறை:

சாதிலிங்கத்தை கட்டியாக எடுத்து தாய்பாலில் ஊற வைத்து பின் தாய்பாலால் 4 சாமம் சுருக்கிடு.

வெய்ப்பு, சீனம், வீரம், பூரம் இவைகளை போதுமானவளவு சேர்த்து முட்டை வெண்கருவால் 4 சாமம் அரைத்து மேற்படி சுருக்கிட்ட இலிங்கத்திற்கு கவசம் கட்டு. மேற்படி கவசத்தை குக்குடபுடமிட பற்பமாகும்.

அளவு : அரிசியளவு
அனுபானம் : தேன்

தீரும்நோய்கள்:

பாரிசவாதம், பாண்டு, காமாலை, குலை,சுரங்களுக்கு 10 நாட்கள் உட்கொள்ளவேண்டும்.

(தன்வந்திரி வைத்தியம் - 1000, பக்கம் - 130)

5. இலிங்க பற்பம்:

செய்முறை:

எட்டிக் கொட்டையை கரிசாலை சாற்றில் ஊறவைத்து அரைத்து இலிங்கத்தை கவசித்து சீலை செய்து உலர்த்தி லகுபுடமிட்டு எடுக்கவும்.

அளவு : 65 மி.கி இருவேளை / 3 - 5 நாட்கள்
அனுபானம் : தேன்
தீரும்நோய்கள் : வாதசம்பந்தப்பட்ட நோய்கள்

- (சித்தர் மெய்ப்பொருள் - பக்கம் - 34)

6. இலிங்கச் செந்தூரம்:

இலிங்கம் : 1 பலம்

வேப்பெண்ணெய் : $\frac{1}{4}$ படி

செய்முறை:

இலிங்கத்தை வேப்பெண்ணெயில் சுருக்கு கொடுத்து தூள் செய்து எடுத்துக் கொள்ளவும்.

அளவு : 65 மி.கி / 2 வேளை

அனுமானம் : தேன்

தீரும்நோய்கள் : மூட்டுவலிகள் குணமாகும்.

(அனுபோக வைத்திய நவநீதம் - பாகம் - 4 - பக்கம் - 57)

7. சிவ பதங்கம் :

சுரக்குகள் :

சுத்தித்த இலிங்கம் : 2 பலம்

வளையறுப்பு : 1 பலம்

சோற்றுப்பு : 5 படி

செய்முறை :

ஒரு சட்டியில் சோற்றுப்பைக் கொட்டி மத்தியில் வளையலுப்பை போட்டு அதன்மேல் இலிங்கத்தை பொடித்துப் போட்டு மேல் சட்டி மூடி ஏழுசீலை செய்து 4 சாமம் எரித்து பதங்கிக்கவும்.

அளவு : உளுந்தளவு. காலையில் மட்டும் 5 நாட்கள்.

தீரும் நோய்கள் : 80 வகையான வாத நோய்கள்

(சித்தர்கள், முனிவர்கள் அருளிய நம் நாட்டு வைத்தியம் , பக்கம் - 289)

8. சண்டமாருதம்:

அளவு : அரிசியளவு / 2 வேளை

அனுபானம் : தேன், நெய்

தீரும் நோய்கள் : வாதநோய்கள், கண்டமாலை

(அகத்தியர் வைத்திய சிந்தாமணி 4000, பக்கம் 426)

9. பஞ்சுகுத செந்துரம்:

அளவு	:	குன்றியளவு / 2 வேளை
அனுபானம்	:	தேன்
தீரும் நோய்கள்	:	பக்கவாதம், வாதநோய்கள்
(அகத்தியர் வைத்திய சிந்தாமணி 4000, பக்கம் 426)		

10. சாதிலிங்க மாத்திரை

அளவு	:	1 மாத்திரை
அனுபானம்	:	தேன்
தீரும்நோய்கள்	:	வாதநோய்கள்
(சிரோ ரத்ன வைத்திய பூஷாணம் , பக்கம் 162)		

11. ஆனந்த வயிரவன் மாத்திரை:

அளவு	:	1 மாத்திரை
அனுபானம்	:	தேன்
தீரும்நோய்கள்	:	வாதநோய்கள்
(மச்சமுனி பெருநூல் எண்ணூறு, பக்கம் - 134)		

12. மார்கண்டன் மெழுகு:

அளவு	:	மிளகு அளவு / 1 வேளை
அனுபானம்	:	பனைவெல்லம்
தீரும்நோய்கள்	:	வாதநோய்கள்
(போகர் வைத்தியம் - 7000, பக்கம் - 361)		

இலிங்கத்திலிருந்து இரசமெடுக்கும் முறை

1. சரக்குகள்:

இலிங்கம்	-	1 பங்கு
சித்திரமூலவேர்பட்டை	-	4 பங்கு

செய்முறை:

சித்திரமூலவேர்பட்டை 4 பங்கு எடுத்து இடித்து, 1 பங்கு இலிங்கத் தூள் சேர்த்துப் பதங்கக் கருவியிலிட்டு முறைப்படி எரிக்க, இரசம் மேற்சட்டியில் ஒட்டிக் கொள்ளும். அதைச் சாக்கிரதையாகப் பிரித்து எடுத்து மயிர்குச்சியினால் சேகரித்துக் கொள்ளவும். இதற்கு இலிங்கரசம் என்பது பெயர்.

2. சரக்குகள்:

மஞ்சள் தூளில் இலிங்கத்தூளை கலந்து, வர்த்தி போலச் சீலையிலிட்டுத் திரித்து, ஓர் அகலில் சுற்றி வைத்துக் கொளுத்தி, கீழிலிருந்து காற்று புகுவதற்காம் இடம் விட்டு, ஒரு பெரிய சாலினை, அகலின் மேல் கவிழ்க்கவும். ஆறின பின் எடுக்க, இரசம் மேல் சட்டியில் படிந்து இருக்கும் - சுரண்டிக் கொள்ளவும்.

(குணபாடம் தாதுசீவ வகுப்பு. பக்கம் - 209)

3. சரக்குகள்:

இலிங்கபொடி	:	5 பலம்
அயப்பொடி	:	2 பலம்
கல்கண்ணாம்பு	:	1 பலம்

செய்முறை:

மூன்றையும் ஒன்று சேர்த்து அரைத்து சட்டியின் அடியிலிட்டு மேல் சட்டி மூடி காய்ந்தபின் அடுப்பேற்றி 2 சாமம் காடாக்கினியாக எரித்து, ஆறவிட்டு மறுநாள் சீலையை பிரித்து சட்டியிலுள்ள இரசத்தை பன்றிமயிறால் சுத்தமாக சுரண்டி எடுத்துப் பிழிய ரசம் மிகுதியாக கிடைக்கும். இதுவே வாலை ரசம் என்பர்.

(சிகிச்சாரத்ன தீபம், பக்கம் - 160)

இலிங்கம் சேரும் பிற மருந்துகள்

1. நவநாத செந்தூரம் :

அளவு	:	488 மி.கி (பணவெடை)
அனுபானம்	:	பருத்திசாறு, தாய்ப்பால், தேன்
தீரும்பிணிகள்	:	சன்னி, சுரம், தோடம்
குறிப்பு	:	சன்னி தீர் தவசு முருங்கைச் சாற்றில் தரவும் (அத்தியர் அட்டவணை வாகடம் - பக்கம் 121)

2. வஜ்ஜிரகண்டி மாத்திரை:

அளவு	:	உளுந்தளவு (65மி.கி)/ 1 மாத்திரை - 2 வேளை
தீரும்வியாதி	:	மேகக்குடைச்சல், விரைவாதம். வேகமுறுஞ்சுரம், புண்புரை, நடுக்கல்சுரம், தாகசுரம், மூர்ச்சை, கணுவாதம், வெள்ளை அரையாப்பு, கண்டமாலை, சன்னி - 13 (கண்ணுசாமி பரம்பரை வைத்தியம், பக்கம் - 129)

3. பாலசஞ்சீவி மாத்திரை:-

அளவு	:	பயறளவு
துணைமருந்து	:	குழந்தைகளுக்கு 1 மாத்திரை (2 வேளை, மாசிபத்திரிபிட்டவியல் சாறு
தீரும் நோய்கள்	:	சுரம், இருமல், தோஷம்
பத்தியம்	:	தாய்ப்பால் பசுவின் பால் (கண்ணுசாமி பரம்பரை வைத்தியமஇ பக்கம் - 170)

4. இலிங்க மாத்திரை:-

அளவு	:	பயறளவு
அனுபானம்	:	இஞ்சி கியாழம்
தீரும்நோய்கள்	:	சகலசுரங்களும் தீரும்
பத்தியம்	:	சுட்டபுளிஇ வறுத்தஉப்பு சேர்க்கவும் (கோசஷாயி அனுபோக வைத்திய பிரம்ம ரகசியம் - I பக்கம்-11)

5. ஒற்றை விரைவாத மெழுகு :

அளவு	:	தூதுளங்காயளவு / இருவேளை
தீரும்நோய்கள்	:	ஒற்றை விரைவாதம் தீரும்
பத்தியம்	:	வாய்வு பதார்த்தம் தள்ளவும். இச்சாபத்தியம்.

(கோஷாயி அனுபோக வைத்திய பிரம்ம ரகசியம் - I பக்கம்-108)

6. வெளிமூலத்திற்கு மருந்து :

தீரும்நோய் : மேற்படி செய்த களிம்பில் கொஞ்சமெடுத்து, மூலமுளைகளின் மீது தடவி புளியம் புறணியை நெருப்பாக்கி அனலில் $\frac{1}{2}$ நாழிகை நேரம் காட்டவேண்டும்.

(அகத்தியர் பள்ளு - 200, பக்கம் - 56)

7. மேகநாதன் குளிகை:-

அளவு	:	கடலை / 1குளிகை / 1வேளை
அனுபானம்	:	முருங்கை வேர்பட்டைச்சாறு, பாகையிலைச்சாறு
தீரும்நோய்கள்	:	கைகாலெரிவு, வாதம், சர்வங்கம், புரளும் வாய்வு, தீரும்.

(வைத்திய அரிச்சுவடி - பக்கம் -98)

8. அஷ்டகுன்மத்திற்கு மருந்து:-

அளவு	:	தூதுளங்காயளவு, / 1 மண்டலம்
தீரும்நோய்கள்	:	எண்வகைகுன்மம், வயிற்றுவலி, வாந்தி குணமாகும், கண்ஒளி உண்டாகும்

(தன்வந்திரி வைத்தியம் - 1000, பக்கம் - 137)

9. சாதிலிங்க பற்பம் (அ) சண்டரச பற்பம்

அளவு	:	50 - 100 மி.கி / 2 வேளை
அனுபானம்	:	பனைவெல்லம்
தீரும்நோய்கள்	:	மூலம், தோற்பணிகள், குன்மம், வாயு, மேகநோய்கள்.

(அனுபவ வைத்திய நவநீதம் - பாகம் - 4, பக்கம் - 39)

10. கனகசுந்தரசம்

அளவு	:	1 - 2 மாத்திரை
அனுபானம்	:	வெந்நீர்
தீரும்நோய்கள்	:	அக்கனிமாந்தம், தீவிரசுரம், சகலஅதிசாரங்கள், கிராணிகள், மூலம் தீரும்.

(அனுபோ கோசஷாய வைத்திய பிரம்ம இரகசியம் - பாகம்- I, பக்கம் - 193)

ஊமத்தை - DATURA INNOXIA MILL

Classification

Kingdom	-	Plant Kingdom
Class	-	Dicotyledons
Subclass	-	Gamopetalae
Series	-	Bicarpellate
Order	-	Polymoniales
Family	-	Solanaceae
Genus	-	Datura
Species	-	innoxia

ஊமத்தையின் வகைகள்:-

1. வெண்ஊமத்தை (Datura innoxia mill) -
அல்லி இதழ்கள் வெள்ளைநிறத்தில் உடையன.
2. பொன்னுமத்தை (Datura metal,minn) -
மஞ்சள் நிறத்தில் பூக்கள் உடையன.
3. கருஊமத்தை (Datura discolor,Bernh) -
அல்லி இதழ்கள் வெளிப்பக்கத்தில் கருமைகலந்த நீல நிறத்திலும், உள்பக்கத்தில் வெள்ளை நிறத்தாலும் காணப்படுகின்றன.
4. அடுக்கு ஊமத்தை: (Datura Species)-
அல்லி இதழ்கள் உள்ளளையும். வெளியேயும், கருமைகலந்த நீலநிறத்தில் காணப்படும்.
5. சீமை ஊமத்தை: (Datura Stramonium, Linn)
6. மருளுமத்தை.

வெண்ணுமத்தை (காட்டுமத்தை):-

எங்கும் பயிராகக்கூடிய செடி. இதன் காய் உருண்டையாகவும், இதன்மீது முட்கள் அடர்ந்தனவாகவும் இருக்கும் இதன்விதை சுரகரப்பாக இருக்கும். இது கருவூமத்தையைப் பார்க்கிலும் வன்மை குறைவு.

பயன்படும் உறுப்பு :	இலை, பூ, காய், விதை
சுவை :	கைப்பு
தன்மை :	வெப்பம்
பிரிவு :	கார்ப்பு

செய்கை

வாந்தியுண்டாக்கி :	வமணகாரி - Emetic
இசிவகற்று :	அங்கர்சஷணநாசினி - Antispasmodic
துயருடக்கி :	வேதனாசாந்தினி - Anodyne
மூர்ச்சையுண்டாக்கி:	நித்ராகாரி.

இச்செய்கைகள் இலை, பூ, காய், விதை முதலியாவற்றிற்கும் உண்டு.

பொதுக்குணம்:

“நாய்க்கடியால் வந்து நலிசெய் விரணமும் போம்
வாய்க்குழிப்புண் கட்டிகளு மாறுங்காண் - தீக்குணத்தைச்
சேமத்தில் வைத்திலடந் தீரு முத்தோ டங்களறும்
ஊமத்தை யன்குணத்தை யுன்னு.”

நாய்க்கடிப்புண், குழிப்புண், கட்டிகள், நஞ்சு, வாதம், பித்தம், கபம் இவற்றை போக்கும்.

இலையின் வழக்குகள்:

- ★ இதன் இலையை உலர்த்திப் பொடி செய்து 32மி.கி அல்லது 100 மி.கி அளவு உள்ளுக்கு கொடுக்க, இரைப்பு நீங்கும்
- ★ இதன் இலையை வதக்கி ஒற்றடமிட, கீல்வாயு, எலும்பு வீக்கம், கட்டிகளினாலுண்டாகும் வலி, பால்கட்டிக்கொள்வதாலுண்டாகும் நோய் இவை தணியும்
- ★ தயிரில் இலை ரசத்தை 5 -10 துளி சேர்த்துக் கொடுக்க வெள்ளை தணியும்.
- ★ இலை ரசத்தை 1 - 2 துளி வரை காதில் விடக் காதுவலி தீரும்

- ★ மத்தன் தைலம் - இலைச்சாற்றைக் கொண்டு செய்யப்படும், மத்தன் தைலம் (பச்சை எண்ணெய்), புண்புரை, ஆறாப்புண், பிளவை, சதைவளர்தல் இவைகளைப் போக்கும்.

(குணபாடம் மூலிகை வகுப்பு இ பக்கம் - 142)

PHYTOCHEMICAL ASPECT:

- Hyoscyamine, Hyosine and Meteloidine isolated from leaves and roots.
- 7-hydroxy-3,6 - bis - tigloyloxytropane (-) 30 α , 6 β - bis - tigloyloxytropane tropine and pseudotropine from roots.
- Scopolamine level in roots was high than in stems and leaves.
- Root contained about 0.3% atropine, but in stems 0.11-0.18% of atropine
- Two new pentacyclic triterpenes – Daturadiol and daturalone from seeds.
- Two alkaloids α and β scopodonnines isolated from seeds.
- Two lectin lectin 11 and lectin 12, composed of arabinose, fucose, xylose, mannose, galactose, and glucose in molar ratio of 6:1:2:1:2:2 and 1:2:1:1:3 respectively isolated from seeds.

(Compendium of Indian Medicinal plants – Vol – I, II, IV, V)

MATERIALS AND METHODS

The test drug linga chendooram was prepared according to the reference found in 'Anuboga vaithia navaneetham' – part 4, page No:45 by Abdhulla saibu.

Collection of the test drug

The raw drug Lingam was collected from the Raw drug store (Pharmacy), Govt.Siddha Medical College,Palayamkottai. It was identified by P.G.Gunapadam Staff's.

Purification:-

The Raw drug Lingam was purified, based on the process found in Gunapadam Thadhu – Zevam Vaguppu, page No.202.

1 Balam (35gm) of Lingam was taken in a bowl. Each 100ml of cowmilk. Lemon juice (Citrus medica var acida – fruit), and juice of Acalypha indica – Linn (Kuppimani) was taken in another one.

Then, the bowl containing Lingam was heated by a fire with mild flame (Deepakkini). In the method of "Churukku" when the mixed juice was slowly poured into the heated bowl, the lingam was roasted in side to side. At the end of the process, it was taken out, and then made to some pieces.

Preparation of Linga Chendooram:-

250gms of purified Lingam was taken and grinded with leaf juice of Datura innoxia mill (Ummathi) in apothetical mortar with pestle (Kalvam) for 12 hours (4 Samam – each 3 hours). The total amount of juice which was used for the grinding process, was about 800ml. Then the lingam was made into small villai's and spread in a suitable pot and then dried in sun light for 3 days. After that, the mouth of pot was covered by another suitable pot, and even 7 layers

of clay cloth was provided to the margin, (which is called as 'kavasam') and dried in sunlight for 3 days.

Consequently, it was subjected into the process of pudam with about 45 dried cow dung cakes (Varieties). Then the villai's were taken off, fine powdered in kalvam, and preserved in the bottle.

Route of administration

Enteral route

Dose - $\frac{1}{4}$ - $\frac{1}{2}$ Kundri (35-65mg) twice a day after meals.

Anubanam- Butter

Indication - Azhal keel vayu (Oster arthritis)

துணை மருந்துகள் (அனுபானம்)

‘சருக்கரை நெய்மது சலநவ நீதம்

பரித்திடு மறிப்பால் பசும்பான் முலைப்பா

லிலவண மேம மெயின் புனல் சீரகச்

சலமுற கின்புனல் சதாபலக் கனி நீர்

வெற்றிலை மழைகான் வெந்நீரி லாங்கலி

யுற்றநீர் பின்ன முறுவன வறிந்ததற்

கேற்றன வவிழ்த மிசைவன வறிந்து கொள்’

- தேரன்காப்பியம் - பக்கம் - 56

மருந்தினை சேர்த்து உட்கொள்ளக் கூடிய அனுபானங்களில் ஒன்று வெண்ணெய்: (நவீந்தம்) ஆகும்.

BIO - CHEMICAL ANALYSIS OF LINGA CHENDOORAM

Preparation of the Extract :

100mg of **Linga Chendooram** was weighed accurately and placed in a clean beaker and added a few drops of conc. Hydrochloric acid and evaporated it well. At the evaporation cooled the content and added a few drops of conc. Nitric acid and evaporated it well. After cooling the content add 20ml distilled water and dissolved it well. Then it is transferred to 100ml volumetric flask and made up to 100ml with distilled water. Mix well. Filter it. Then it is taken for analysis .

QUALITATIVE ANALYSIS

S. No	Experiment	Observation	Inference
1.	Test for calcium 2ml of the above prepared extract is taken in a clean test tube. To this add 2 ml of 4% ammonium oxalate solution.	White precipitate is formed	Indicates the Presence of calcium
2.	Test for sulphate 2ml of the extract is added to 5% barium chloride solution.	White precipitate is formed	Presence of sulphate
3.	Test for chloride The extract is treated with silver nitrate solution.	White precipitate is formed	Presence of chloride
4.	Test for carbonate The substance is treated with concentrated Hcl.	No brisk effervescence	Absence of carbonate
5.	Test for Zinc The extract is added with weak iodine solution.	No white precipitate is formed	Absence of zinc
6.	Test for iron Ferric The extract is treated with concentrated glacial acetic acid and potassium ferro cyanide.	No blue colour is formed	Absence of ferric iron
7.	Test of iron Ferrous The extract is treated with concentrated Nitric acid and ammonium thio cynate.	No blood red colour is formed	Absence of Ferrous iron

8.	Test for phosphate The extract is treated with ammonium molybdate and concentrated nitric acid.	No yellow precipitate is formed	Absence of phosphate
9.	Test for albumin The extract is treated with Esbach's reagent.	No yellow precipitate is formed	Absence of albumin
10	Test for Tannic acid The extract is treated with ferric chloride reagent.	No blue black precipitate is formed	Absence of tannic acid
11.	Test for unsaturation Potassium permanganate solution is added to the extract.	It does not gets decolourised	Absence the presence of unsaturated compound
12.	Test for the reducing sugar 5ml of benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8-10 drops of the extract and again boil it for 2 mts.	No colour change occurs	Absence of reducing sugar
13.	Test for amino acid: One or two drops of the extract is placed on a filter paper and dried # well. After drying, 1% ninhydrin is sprayed over the same and dried well.	No violet colour is formed	Absence of amino acids
14	Test for mercury The extract is treated with Ammonia and boil(till the ammonia ceases off) and then potassium Iodide is added.	A scarlet precipitate is formed.	In indicates the presence of mercury

INFERENCE

The given sample of **Linga Chendooram** contain **Calcium, Sulphate, chloride, mercury.**

PHARMACOLOGICAL STUDIES

ANALGESIC STUDY OF LINGA CHENDOORAM

ON ALBINO RATS BY TAIL-FLICK METHOD

AIM

To study the analgesic effect of **Linga Chendooram** on albino rats by Tail-flick method.

MATERIAL AND METHODS:

PREPARATION OF THE TEST DRUG:

100mg of **Linga Chendooram** was suspended in 10ml of distilled water using as suspending agent. This 1ml contains 20mg of the test drug.

INSTRUMENT:

Hot water bath maintained at $55^{\circ}\text{C} + 0.5^{\circ}\text{C}$ was used as the source of stimulus.

PROCEDURE:

Healthy albino rats weighing 100-200gms of both sexes were selected. The tail of each rat was dipped in the hot water bath and time taken for the rat to remove the tail from the water bath was noted. The rats that take more than 5 seconds to remove the tail are excluded from the equipment. Then the rats were divided into 3 equal groups, each group having 2 rats. The first group was given the solvent used to suspend the drug and kept as untreated control. The second group was given the standard drug and kept as treated control. The third group was given the test drug 20mg/100gm, 1/2 hr and 1hr after drug administration the rats

are again tested by dipping the tail in the hot water bath. The time taken for the rat to remove the tail was noted as done initially.

The result of control group standard group and treated group were tabulated and compound.

ANALGESIC EFFECT OF LINGA CHENDOORAM

Serial No.	Name of Drugs / Groups	Dose /100 gram body weight	Initial Reading	After Drug Administration			Mean
				$\frac{1}{2}$ hr. Average	1hr. Average	1½ hr. Average	Difference
1	Control	2ml	2.5secs	2.5secs	2.5secs	2.5secs	2.5sec
2	Standard Paracetamol	20mg	2.5secs	3.5secs	5.0secs	6.5secs	6.5secs
3.	Test Drug Linga Chendooram	20mg	2.5secs	3.0 secs	4.0secs	5.0secs	5.0 sees

INFERENCE

The test drug **Linga Chendooram** has **got significant Analgesic Activity.**

ACUTE ANTI-INFLAMMATORY STUDIES CARRAGEENIN INDUCED HINDPAW OEDEMA METHOD

METHOD:

Carrageenin induced Hind paw edema method in Albino rats.

AIM:

To evaluate the acute anti - inflammatory effect of **Linga Chendooram** by carrageenin induced oedema method in albino rats.

DRUG PREPARATION

100mg of **Linga Chendooram** was suspended in 10ml of distilled water using as suspending agent. This 1ml contains 20 mg of the test drug.

PROCEDURE

Six healthy albino rats of either sex weighing between 100-120gm were selected. The volume of each hind paw was measured by using the mercury plethysmograph.

After the measurement of hindpaw of all the rats, they were divided into three groups each containing two rats.

First group was kept as control by giving distilled water of 2ml/100mg of body weight. The second group was given ibuprofen 20mg/100gm body weight and kept as standard. Third group was given test drug **Linga Chendooram** 20mg/100gm body weight.

The drugs were administered orally, one hour after drug administration, 0,1ml 1% (W/V) of carrageenin suspension in water was injected in the plantar surface of hind paw of rats.

All the animals were given carrageenin injection subcutaneously. Three hour after carrageenin injection, the hindpaw volume was measured from the differences in the initial and final hind paw volume, the degree of the inflammation was calculated by taking the volume in the untreated control group as 100%.

The percentage of inflammation of the other group was calculated from the degree of anti - inflammatory effect of the treated and the test groups were calculated.

RESULTS

The details of the experiment results are shown in the table

ACUTE ANTI INFLAMMATORY EFFECT OF LINGA CHENDOORAM

Group	Drug	Dose 100gm of body weight	Initial Reading average	Final reading average	Mean difference	Percentage inflammation	Percentage inhibition
Control	Water	2ml	0.55	1.40	0.85	100	-
Standard	Ibuprofen	20mg	0.55	0.85	0.3	35.2	64.8
Test Drug	Linga Chendooram	20mg	0.65	0.87	0.22	25.8	74.2

INFERENCE:

Thus **Linga Chendooram** has got significant acute anti inflammatory effect.

CHRONIC ANTI - INFLAMMATORY EFFECT OF LINGA CHENDOORAM IN RATS BY COTTON PELLETS GRANULOMA METHOD

AIM:

Chronic Anti - Inflammatory effect of **Linga Chendooram**.

DRUG PREPARATION:

100mg of **Linga Chendooram** was suspended in 10ml of distilled water. This 1ml contains 20mg of the test drug.

PROCEDURE:

Six healthy albino rats weighing 100 - 150gms were taken and divided in to three groups, each consisting of two rats.

In this procedure, the drugs were given daily for 7 days. Before giving the drug cotton pellets each weighing 10mg were prepared and sterilised in the autoclave for about 1 hr under 15Hg atmospheric pressures on the day of experiment, each rat was anaesthetised with ether to implant 10mg of sterilised cotton pellets subcutaneous in the lower abdomen two on each side after making suitable incision and sutured carefully.

First group was kept as control by giving distilled water of 2ml/100gm of body weight. To the second group, the standard drug Ibuprofen in a dose of 20mg/100gm body weight was given. The third group of animals was given tested drug **Linga Chendooram** in a dose of 20mg/100gm of body weight. On the 8th day of the experiment, all the rats were sacrificed and cotton pellets found to be surrounded by granulation tissue were removed and dried in hot air oven at 55°C -60°C.

The average weight of granuloma of control group and treated group gives an estimation of degree of Inhibitory activity of test drug.

RESULTS

The details of the experiment result are shown in the table.

CHRONIC ANTI INFLAMMATORY EFFECT OF LINGA CHENDOORAM

Sl.no	Group	Dose/100gm of body weight	Cotton Pellet weight	Pellet weight to the Granuloma of drugs	Percentage of Inflammation	Percentage of Inhibition
1	Control (water)	1ml	10mg	250mg	100	-
2	Standard (Ibuprofen)	20mg	10mg	55mg	22	78
3	Test drug Linga Chendooram	20 mg	10mg	100mg	40	60

INFERENCE

The test drug **Linga Chendooram** has **got significant chronic anti- inflammatory Effect.**

ANTIPYRETIC STUDY OF THANDRIKKAI CHOORANAM IN YEAST INDUCED HYPER PYREXIA ALBINO RATS

The test drug **Linga Chendooram** was screened for its antipyretic activity with the help of yeast induced hyperpyrexia albino rats.

AIM:

To evaluate antipyretic activity of **Linga Chendooram**.

PREPARATION OF THE TEST DRG:

100mg of **Linga Chendooram** was dissolved in 10ml of water. 1ml of this preparation contains 20mg of the test drug.

YEAST INDUCED HYPERPYREXIA:

Six healthy albino rats of either sex, weighing between 80-100gm were selected. They were divided into 3 groups of 2 rats in each group. All the rats were made hyperthermic by giving subcutaneous injection of 12% of yeast in distilled water 1ml/100 gm of body weight.

After 10 hours, the initial temperature (0 hr) was taken for all the rats. First group of rats were given 2ml of water and kept as control. The second group received 20mg/100gm of body weight of Paracetamol and the third one received the test drug **Linga Chendooram** 200mg/100gm body weight.

The mean rectal temperatures for all the rats were recorded at 1 1/2 hr, 3hr, and 4 1/2 hours after the drug administration.

The difference between the 3 groups are measured and compared.

RESULTS :

The details of the experiment and the results were shown in the table.

ANTIPYRETIC EFFECT OF LINGA CHENDOORAM:

Serial No.	Name of Drug / Groups	Dose /100 gm body weight	Initial Temperature in centigrade	After Drug Administration			Remarks	
				1 ½ hour	3.0 hour	4 ½ hour		
1 .	Control (Water)	1ml	36.0 37.0	36.0 37.0	36.0 36.0	37.0 39.0	38.0	-
2.	Standard (Paracetamol)	20mg	37.0 38.0	37.0 37.0	36.5 36.5	35.0 34.0	34.5	-
3.	Linga Chendooram	20mg	37.0 36.0	37.0 36.0	36.0 35.5	35.0 35.0	35.0	-

INFERENCE

The test drug **Linga Chendooram** has got significant anti pyretic activity

ACUTE TOXICITY STUDY

Animals :

Wister albino rats bred in the animal houses attached to the Postgraduate, Pharmacology, Department Govt. Siddha Medical College, Palayamkottai were used.

Sex :

Animals of both sexes were used.

Weight

Animals weighing between 80 – 120gms

Food and water

The animals were maintained with standard animal feed and water adlibitum.

Number of animals:-

10 rats were divided into 5 groups each consisting of 2 rats.

Dose Levels

The following dose levels were arbitrarily fixed by presuming a range of least to high toxic doses.

I Group	-	20mg/ animal kg bw
II Group	-	40mg/ animal kg bw
III Group	-	80mg/ animal kg bw
IV Group	-	160mg/ animal kg bw
V Group	-	320mg/ animal kg bw

Route of administration

The drug was administered orally.

Drug Preparation

The drug was weighed and taken and suspended in honey with gum – acacia as suspending agent. It was grounded well before administration the preparation was done in such a way that 1ml of the following table. The drug was administered once on the day of the experiment.

Observation:

The following parameters were noted.

Central effects :

1. Stimulation:

- Hyper activity
- Piloerection
- Twitching
- Rigidity
- Irritability
- Jumping
- Clonic Convulsion
- Tonic convulsion

II. Depression:

- Ptosis
- Sedation
- Sleep
- Loss of traction
- Loss of Pinna reflex
- Ataxia
- Catatonia
- Loss of muscle tone
- Analgesia

III. Autonomic effect:

- Straub's tail flicking
- Laboured respiration
- Cyanosis
- Blanching
- Reddening
- Abnormal secretions

At the end of 24hrs, the number of animals dead in each group was noted and the approximate LD₅₀ was determined. The animal were morphologically examined for any toxic symptoms.

Table No:- 1 shows the results of acute toxicity study of 'Linge chendooram' at 20/40/80/160/320mg dose levels

I. Stimulation

Observation	At 1 Hour	At 2 Hour	At 4 Hour	At 24 Hour
Hyperactivity	-	-	-	-
Pyloreaction	-	-	-	-
Twitching	-	-	-	-
Rigidity	-	-	-	-
Irritability	-	-	-	-
Jumping	-	-	-	-
Clonic convulsions	-	-	-	-
Tonic convulsions	-	-	-	-

II - Depression

Observation	At 1 Hour	At 2 Hour	At 4 Hour	At 24 Hour
Ptosis	-	-	-	-
Sedation	-	-	-	-
sleep	-	-	-	-
Loss of traction	-	-	-	-
Loss of pinna reflex	-	-	-	-
Ataxia	-	-	-	-
Loss of muscle tone	-	-	-	-
Analgesia	-	-	-	-

III – Autonomic effect

Observation	At 1 Hour	At 2 Hour	At 4 Hour	At 24 Hour
straub tail	-	-	-	-
Laboured respiration	-	-	-	-
cyanosis	-	-	-	-
Blanching	-	-	-	-
Reddening	-	-	-	-
Abnormal Secretions	-	-	-	-

IV. Number of deed

After 24 hrs	-	-	-	-
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(-) Negative sign (+) Positive sign

Result:

The drug did not produce any mortality up to 320mg / animal kgbw. So it was inferred that the drug is safe up to 320mg / animal kgbw.

CHRONIC TOXICITY STUDIES ON ALBINO RATS FOR LINGA CHENDOORAM

(This section was taken from the previous dissertation
Reg. No. 2623 by Dr. Anoop Austin)

Preparation of the test drug:

200mgs of the 'Linga Chendooram' was suspended in 5ml of honey with 5 ml of water and each rat was given 2ml/100 gms. body weight orally. This 1ml contains 20mgs of the drug.

Procedure:

Twelve albino rats of either sex were selected and divided into four groups each containing three rats.

The first group and third group were given distilled water 1ml/100gms. body weight without fail for 30 and 90 days respectively and was kept as control. The second and fourth group received the test drug, Linga Chendooram in a dose of 1ml containing 20mgs/100gms. body weight daily without fail for 30 and 90 days respectively and was kept as test group.

The body weight of each rat was taken initially and then the changes were recorded every 30 days for both treated and untreated animals.

After completion of 30 days, the first and second group of rats were sacrificed. The blood was collected from each rat by cutting its carotid vessels and samples were analyzed for haematological and bio-chemical analysis.

The liver and kidney were also removed and preserved in 10% formaldehyde and was subjected for histopathological examination.

The above same procedure was carried out on completion of 90 days for the third and fourth groups of rats respectively.

Body weight and Haematological findings of test 30 days

No	Group	Drug	Dose/100 gms	weight of albino rates in grams		Haematological findings						hb gms %	Blood Bio - Chemistry	
				Initial	After 30 days	Total Count	Differential count						Sugar (Random) mg %	Urea mg %
							Poly %	Lym %	Eos %	Bes %	Neu %			
1	I	water	1 ml	160	175	7800	30	68	2	-	-	76	109	40
2	I	water	1 ml	165	180	8000	32	66	3	-	-	78	115	42
3	I	water	1 ml	160	170	7600	28	70	2	-	-	74	105	38
4	II	Linga Chendooram	20 mgs	200	225	9200	30	69	1	-	-	72	126	68
5	II	Linga Chendooram	20 mgs	200	225	9400	35	62	2	-	-	74	126	62
6	II	Linga Chendooram	20 mgs	225	250	10000	56	40	4	-	-	76	135	65

Body weight and Haematologica findings after 90 days

No	Group	Drug	Dose/100 gms	weight of albino rates in grams					Hematological findings					hb gms %	Blood Bio - Chemistry	
				Initial	after 30 days	after 60 days	after 90 days	Total Count	Differential count						Sugar	urea
									Poly %	Lym %	Eos %	Bes %	Neu %			
1	I	water	1 ml	160	165	170	180	8700	20	78	2	-	-	70	109	40
2	I	water	1 ml	150	160	165	175	9200	12	86	2	-	-	69	115	45
3	I	water	1 ml	155	160	170	175	8200	28	70	2	-	-	70	91	42
4	II	Linga Chendooram	20 mgs	190	200	210	220	8800	54	44	2	-	-	73	115	54
5	II	Linga Chendooram	20 mgs	175	185	200	210	8200	52	46	2	-	-	74	126	60
6	II	Linga Chendooram	20 mgs	165	180	200	210	9400	56	42	2	-	-	72	100	64

HISTOPATHOLOGICAL FINDINGS

Kidney: (Fig-3, Fig-4, Fig-5, Fig-7, Fig-10)

30 days treated kidneys reacted by producing an extensive necrosis of tubular epithelium proteinaceous exudate of tubules and inflamed interstitium.

90 days drug treated kidneys showed focal sclerosis of glomeruli, cloudy swelling of the tubules, mesangial proliferation, interstitial oedema and focal interstitial haemorrhage.

Liver (Fig-6, Fig-8, Fig-9)

In early phase the tissue reaction was vascular with dilated veins.

90 days drug treated liver showed parenchymal (hepatocellular) changes including random necrosis of the hepatocytes.

Inference:-

The Histopathological studies show that the toxic effect of the drug on renal parenchyma vessels, necrosis and also inflammatory changes in the liver cells. Haematological findings also confirm the elevated urea level. So, the drug is hepatotoxic and nephrotoxic and not suitable for long term therapy.

ANTIMICROBIAL ACTIVITY OF LINGA CHENDOORAM BY KIRBY BAUER METHOD

AIM:

To determine the Antimicrobial activity of **Linga Chendooram**.

Components of medium:

Beef extract	:	300gms/lit
Agar	:	17gms/lit
Starch	:	1.5gms/lit
Casein hydroxylate	:	17.5gms/lit
Distilled water	:	100ml
pH	:	7.6

Procedure :

The method of antimicrobial activity study is **disc diffusion method**. The principle of antibiotic sensitivity test is simple. Antibiotic discs are prepared with known concentration of the drug (1gm in 10 ml of distilled water) and placed on agar plates that has been inoculated with the test organism. The antibiotic diffuses through the agar producing an antibiotic concentration. Gradient effectiveness of susceptibility is proportional to the diameter of the inhibitory zone around the disc organism which grows upto the edge of the disc are resistant.

The recommended medium in this method is Muller Hinton Agar, its pH should be between 7.2 – 7.4 and should be poured to uniform thickness of 4mm in the Petri plate (25 ml) for certain fastidious microorganism.

Methodology:

- ⇒ Muller Hinton Agar plates are prepared and pseudomonas, vibrio cholerae, E.coli, Bacillus, Klebsiella, Micrococcus, Streptococcus, is inoculated separately.
- ⇒ The prepared discs of antibiotics **Linga Chendooram**. are placed over the incubated plate using sterile forceps and incubated for 24 hours at 37⁰ Celsius.
- ⇒ The plates after 24 hours incubation are observed for the zone of inhibition.

Result:

The diameter of zone of inhibition **Linga Chendooram** as
Escherichia coli - **8mm**

KIRBY BAUER ANTIMICROBIAL SUSCEPTIBILITY METHOD

S.No.	Test Drug	Organisms (cultures)	Susceptibility	Zone size (mm)
1.	Linga Chendooram	Escherichia coli	Moderate sensitivity	8mm
2.		Klebsiella	Resistance	
3.		Proteus	Resistance	
4.		Styphylo coccus aureus	Resistance	
5.		Strepto coccus pneumoniae	Resistance	
6.		Pseudomonas aeruginosa	Resistance	
7.		Candida albicans	Resistance	

METHODOLOGY FOR ANALYSIS OF METALS BY ATOMIC ABSORPTION SPECTROMETER

Principle:

Atomic absorption is the process that occurs when a ground state atom absorbs energy in the form of light of a specific wavelength and is elevated to an excited state. The amount of light energy absorbed at this wavelength will increase as the number of atoms of the selected element in the light path increase. The relationship between the amount of light absorbed and the concentration of analyses present in known standards can be used to determine unknown sample concentration by measuring the amount of light they absorb.

The absorption of light is proportional to the concentration of free atoms in the flame is given by Lambert-beer law.

$$\text{Absorbance} = \log_{10} I_0/I_t = k.c.l$$

Where, I_0 = intensity of incident radiation emitted by the light source.

I_t = intensity of transmitted radiation.

C = concentration of sample (free atoms),

k = constant

l = path length

Methodology for Metal Analysis :

a) Sample collection

The samples will be cleaned and dried under shade. The dried samples will be then grinded and powdered in an agate pestle and mortar. Samples will be labeled and stored in pre-cleaned polyethylene bottles for further analysis.

b) Reagents and apparatus:

All the reagents such as HNO_3 , and H_2O_2 purchased from MERCK (Analytical Grade). De-ionized water will be used for all analytical work and all the glassware's, polyethylene bottles, pipette tips and others will be washed with 1% HCL, rinsed with de-ionized water before preparing standards, reagents and samples.

c) Digestion of samples(Sample preparation)

A multwave 3000 micro oven system (from Anton paar, USA) with 16 position Teflon vessels with capping is being used here. The digestion vessels are provided with a controlled pressure, temperature and release valve. Before use, all Teflon vessels are soaked with 10% HNO_3 . The system is initially programmed by giving gradual rise of 20%, 40%, and 50% power for 5, 15 and 20 minutes respectively for the due warming up. The powder samples are being used without any further treatment for sample preparation. 0.2 g of sample is weighed into the Teflon vessels followed by digestion mixture of HNO_3 , and H_2O_2 in the ratio of 3:1, according to the nature of samples are being applied.

The resulting solution after microwave digestion is filtered through whatman # 40 filter paper (if necessary) and diluted to 5 ml with de-ionized water. A sample blank containing only acid mixture is prepared at the same time. The method of standard addition is generally adapted to calibrate the instrument before going for the observation of the samples.

Determination of metals:

All the atomic measurements are carried out with Perkin Elmer model 400/HGA900/AS800 coupled with mercury hydride system - 15 (MHS-15) and Flame Photometer. The lamps of Hallow

cathode lamp (HCL) for Fe, Cu, Mn, Zn, Ni,Co and Electrodeless Discharge Lamp(EDL) for Cd, Pb, Hg and As, analysis are used as a light source to provide specific wavelength of the elements to be determined and high purity (99.999%). Acetylene, Nitrous oxide are used to provide constant thermal energy for atomization process and Argon gas used for carrier gas purging purposes for Graphite furnace.

Calibration of instruments:

More than three working standard solution of elements to be determined are prepared, covering the concentration range as recommended by the manufacturer of the instrument for the elements to be determined. Before the analysis of samples, the instruments will be calibrated with prepared working standard solution. The calibration curves will be obtained for concentration vs. absorbance data statistically analyzed. Calibration of the instrument will be repeated periodically during operations and blanks will be carried with each set of 10 samples or aspirate any one of the prepared working standard for every 10 samples to check the instrument drift and to validate analytical procedures and performance. Recent blank reading will be taken and necessary correction will be made during the calculation of concentration of various elements.

Standard Certified Reference (SRM) of National Institute of Standard and Technology (NIST) will be used for day-to-day for the evaluation of methods of analysis or test and for long-term quality assurance of measurements. A recent blank reading will be taken and necessary corrections will be made during the calculation of concentration of various elements. **Fe, Cu, Mn, Zn, Mg, Mo etc., metals analysis (Flame AAS/Graphite furnace)**

After calibrating the instrument with prepared working standard, the digested liquid sample's solution is subjected to analysis of Fe, Cu, Mn, Zn, Ni, Co by AAS flame and As by furnace with specific instrumental conditions as given by instruments manufacturer. Introduce the solution into flame, record the reading, using the mean of the three reading and quantified the concentration of the metals in the given samples against the standard calibration curve obtained from concentration vs. Absorbance of the prepared known concentration on the day of the analysis.

Hg analysis by cold vapour method:

After calibrating the instrument with prepared working standard, the 10 ml of digested liquid sample's pipette out to a specific container of mercury Hydride system analyzer followed by adding 1,5% of Hcl of 10 ml as diluent for each flask and blank, 3% of NaBH₄ solution in 1% of NaoH is run through the reaction flask to quartz cell with out heating against the calibration curve obtained from concentration vs absorbance of the prepared known concentration on the day of the analysis.

Reference

1. Analysis, 2000,28,850-854. © EDP Sciences, Wiley - VCH 2000
2. Analytical Sciences April 2000 Vol.16, © The Japan Society for Analytical Chemistry.
3. The Sciences, (2); 74-77 March-April 2001.

Heavy Metal Analysis of the **Linga Chendooram** was done in the Bio -Technology Department of Sastra University using AAS(Atomic Absorption Spectrometer) and the results are given below.

Inference:

From the above Heavy Metal Analysis it is concluded that **Linga Chendooram** contains

Fe- 25.68	Cu-5.76
Mn-1.256	Zn – 3.0560
Ni-0.2328	Co-0.1648
Cd- 0.1296	Pb-3.9680
Hg-0.3450	As – 0.7386

GEO CHEMICAL ANALYSIS

Instrument used : Atomic absorption spectrometer – Model A Analyst

400/HGA 900 / AS / 800-perkin Elmer

Name of the Trial drug : Linga Chendooram **Units**
in ppm

Sample name	Fe	Cu	Mn	Zn	Ni	Co	Cd	Pb	Hg	As
Linga Chendooram	25.68	5.76	1.256	3.0560	0.2328	0.1648	0.1296	3.9680	0.3450	0.7386
WHO limit	25	15	5	15	10	1	0.3	10	1	10

CLINICAL ASSESSMENT

Azhal keel vayu is a disease mainly affecting the major weight bearing joints. Normally there is a change in the joint at certain age group. It affects the knee joint which do a lot of functions like flexion, extension etc.

In order to assess the efficacy of the “Linga Chendooram” for Azhal keel vayu, a clinical trial was taken on 40 cases of different age in both sexes.

They were clinically diagnosed as Azhal keel vayu, according to selection criteria's and Siddha literature. Among them 30 patients were treated in out –patient department and 10 patients were treated in In-patient department, at P.G.Gunapadam, department of the GSMC Hospital, Palayamkottai.

Immediately after the admission full clinical data were recorded and diagnosis was done on the basis of Siddha principles such as Envagai thervu Mukkutram etc. The admitted patients had different signs and symptoms of varying severity.

In routine blood investigations were done in each case. Radiological investigations were also carried out. Radiological investigations were mainly used to confirm osteo arthritis and also to rule out the other causes and diseases. The causes were screened as per the following criteria.

Including criteria

- Age group : Above 40 years.
- Pain in major joints (Knee joints)
- Swelling

- Morning stiffness.
- Limitation of movements
- Creptation of the joints
- Aggravated pain during, walking, sitting and squatting position
- Obese
- Restricted movements.
- X-ray finding

Signs and symptoms vary in severity from patient to patient.

Excluding criteria

- Sudden onset of excruciating pain marked swelling and redness of the big toe.
- Age group younger age group below 30 years
- Raised level of Uric acid
- Involvement of smaller joints
- Migrating joint pain
- Mantoux test positive (and Sputum AFB test positive)
- RA factor positive
- STS positive
- Haemorrhagic effusion
- Osteoporosis
- Osteo sarcoma
- Traumatic causes
- Osteo myelitis
- Psoriatic arthritis

Diet and advice

- The patients were advised to take easily digestible foods like rice kanje' bread etc.

- To avoid Tamarinds
- To avoid vayu patharthams like potato, dal, unripened banana and sour items viz. curd and tomato etc.
- To avoid cold, damp climate
- Avoidance of stress
- To avoid pungent, bitter taste
- Obese patients were advised to reduce their body weight in order to avoid stress.
- Advise to do quadriceps exercise
- Advise to change their occupation
- Advise to take rest but prolonged immobilization should be avoided as it leads to the stiffness of the joint further in incapacitating the patient.
- Advise to take hepato protective tonics like Liv-52 with the drug.
- Advise to consume more amount of water.

Drug and Dosage

The test drug “Linga Chendooram” was given to the patients at a dose of 65mg. Two times a day with butter as the vehicle after meals. For In-patients the drug was given along with the Anupanam(Vehicle) butter while the out patients were strictly advised to consume the drug with butter only. The drug was given for a maximum of 45 days. During drug administration no adverse reactions were noted. The drug was well accepted by all the patients.

Observation

Routine investigations and also radiological investigations were done before and after treatment. If patient complained of any other complaints during the treatment period they were treated with

other Siddha medicines. For both Out-patients and In patients time was noted for walking to a distance of 100 feet's on admission and after treatment.

The results were assessed on the basis of the symptomatic relief obtained by the patients and by clinical examinations daily in In-patient department and once in three days in out patient department.

In the study of 40 patients , 25 were males and the remaining 15 were females. Almost all the patients were laboures and farmers of poor socio economic status.

Drug response:

The course of treatment varied from 25-45 days most of the patients got no improvement with in 5 days. Mostly pain and stiffness were relived from 7th -10th day of treatment and other symptoms subsided and relieved simultaneously during the further course of treatment. 30 cases had good response, 8 cases had fair response and 2 cases had no response.

Tabulation showing (Age wise / Sexwise)

Distribution of Patients

Sl.No	Age in Years	Sex		Total
		Male	Female	
1)	40 - 49	4	6	10
2)	50 -59	7	7	14
3)	60 - 69	11	2	13
4)	70 - 79	3	0	3
	Total	25	15	40

Tabulation of Results

Result	No. of Patients	Percentage
Complete Relief	30	75%
Partial Relief	8	20%
No. Relief	2	5%
Total	40	100%

In the clinical trials done for 40 patients good result is obtained for 75% optimum fair result is obtained for 20% and no result is obtained for 5%

In this study, it was found that the test drug 'Linga Chendooram' possesses effective anti- inflammatory analgesic action there by reducing pain and swelling which was found clinically. Radiological findings revealed a marked reduction in the inflammation of soft tissue of the affected joints.

BIO-STATISTICAL ANALYSIS

STUDY ON THE EFFECTS OF LINGA CHENDOORAM INCURRING OF AZHAL KEEL VAYU

Description of clinical trials

The clinical trials which were given **Linga Chendooram** were analyzed and described according to their sex and age.

Table :1. Age and sex wise distribution of study subjects

S.No	Age group in years	Male		Female		Total	
		No	%	No	%	No	%
1.	40-49	4	10	6	15	10	25
2.	50- 59	7	17.5	7	17.5	14	35
3.	60- 69	11	27.5	2	5	13	32.5
4.	70- 79	3	7.5	0	0	3	7.5
5.	Total	25	62.5	15	37.5	40	100
6.	Mean age	57.8		50.8		55.1	
7.	Standard deviation	10.6		6.5		10	
8.	‘t’	0.712					
9.	Significance	P>0.05					

The above table- 1 describes the age and sex of the study subjects. The males participation was 62.5% and the female was 37.5%. in respect of age, mean age of male was 57.8 ± 10.6 and female mean age was 50.2 ± 6.5 . The age and sex wise difference was not statistically highly significant($t=0.712$, d.f.=38, $P>0.05$)

The total study subjects was 55.1 ± 10.0 and the estimation population mean at 95% confidence interval was between 50 to 59 years.

Effectiveness of the drug Linga Chendooram

The effectiveness of the drug was analyzed and interpreted by calculating mean and standard deviation of the variables leg pain , stiffness, measurement , tenderness, swelling and duration of 100 feet walk. The above variables were recorded before administration of the drug and after administration of the drug. The mean and s.d of the all variables were calculated for both time (before and after) and compared. The results are available the below table.

Table 2. Standard deviation of the variable symptoms

S.No	Variable symptoms	N	Leg	Before		After		Mean difference	“ t”	Significance
				Mean	S.D	Mean	S.D			
1.	Pain	40	Right	1.65	1.0	0.175	0.4	1.475	9.214	P< 0.001
			Left	1.725	1.0	0.175	0.5	1.55	10.515	P< 0.001
2.	Stiffness	40	right	0.75	0.4	0.25	0.2	0.725	10.14	P< 0.001
			Left	0.8	0.4	0.15	0.5	0.65	6.607	P< 0.001
3.	Measurement	40	Right	37.7	1.3	37.3	1.3	0.36	4.774	P< 0.001
			Left	37.6	1.4	37.3	1.3	0.26	5.547	P< 0.001
4.	Tenderness	40	Right	0.425	0.5	0.075	0.3	0.35	4.583	P< 0.001
			Left	0.5	0.5	0.075	0.3	0.425	5.369	P< 0.001
5.	Swelling	40	Right	0.95	0.9	0.2	0.5	0.75	6.389	P< 0.001
			Left	0.90	0.8	0.15	0.4	0.75	6.708	P< 0.001
6.	Time for 100 feet	40		58.5	6.1	49.7	6.5	8.8	21.457	P< 0.001

The above table- 2 shows that the comparison of symptoms before and after administration of the drug. The pain in the right and left legs before treatment were 1.65 ± 1.0 and 1.725 ± 1.0 and the same in the after treatment were 0.175 ± 0.4 and 0.175 ± 0.5

respectively. The differences of the pain before and after in the right and left legs were 1.475 and 1.55 and the differences were statistically highly significant. (Right- $t = 9.214$, $d.f = 39$ & $P < 0.001$, Left $t = 10.515$, $d.f = 39$ and $P < 0.001$).The stiffness on the right leg was 0.75 ± 0.4 and 0.250 ± 0.2 before and after respectively.

In the left leg, the stiffness was 0.8 ± 0.4 and 0.15 ± 0.5 before and after respectively. The mean reduction of stiffness in right and left legs were 0.725 and 0.65 respectively and the differences were statistically highly significant(Right - $t = 10.14$, $d.f = 39$ & $P < 0.001$, Left- $t = 6.607$, $d.f = 39$ and $P = 0.001$).

The reduction of measurement 0.36c.m in the right leg was statistically significant. The mean measurement in the right leg before treatment was 37.675 ± 1.9 . The reduction of measurement 0.5c.m in the right leg was statistically significant($t = 4.774$, $d.f = 39$, and $P < 0.001$). Similarly, the measurement in the left leg was also reduced as 0.26 c.m. this mean reduction of measurement was also statistically significant ($t = 5.547$, $d.f = 39$ and $P < 0.001$).

Similarly, the measurement in the left leg was also reduced as 0.6 c.m. this mean reduction of measurement was also statistically significant($t = 8.505$, $d.f = 39$ and $P < 0.001$).

The reduction of tenderness in both legs were 0.35 in right and 0.425 in left. The differential statistics of tenderness were in right leg($t = 4.583$, $d.f = 39$, and $P < 0.001$) and in left($t = 5.369$, $d.f = 39$ and $P < 0.001$).

The swelling of both legs were considerably reduced in the right leg as 0.75 ($t = 6.389$, $d.f = 39$, and $P < 0.001$) and left leg as 0.75

($t = 6.708$, $d.f=39$, and $P<0.001$). The mean 100 feet walking distance before treatment was 58.5 ± 6.1 and after treatment 49.7 ± 6.5 seconds. The mean reduction of 8.8 seconds were statistically highly significant ($t = 21.457$, $d.f=39$, and $P<0.001$). The considerable and statistically highly significant reduction of pain, stiffness, measurement, tenderness, swelling and 100 feet walking time before were proving the effectiveness of Linga Chendooram

Response of the drug

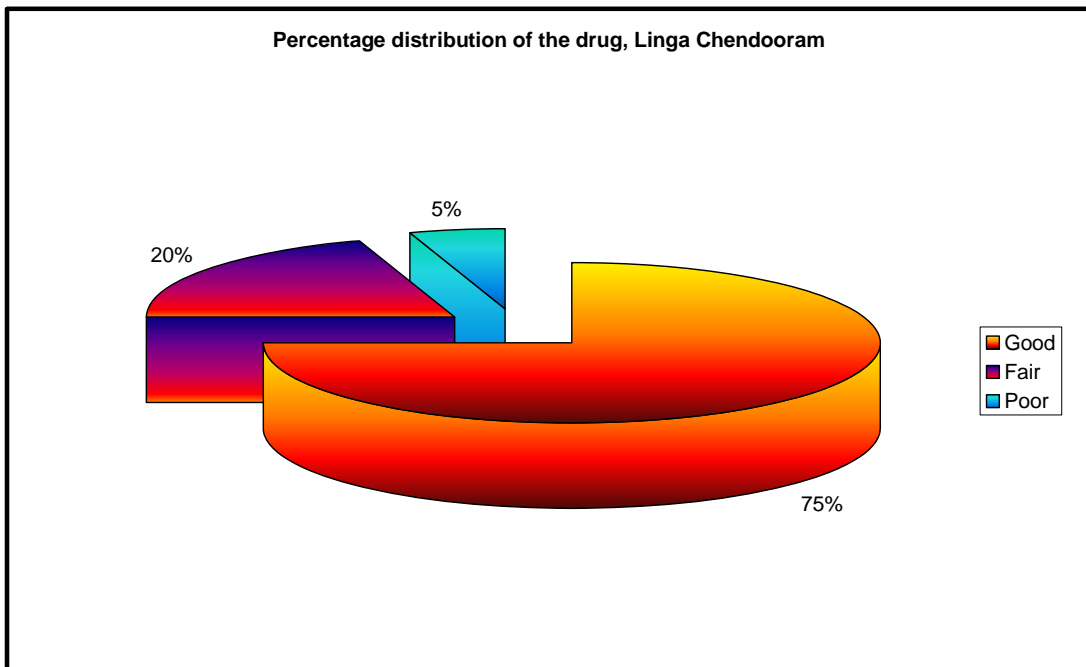
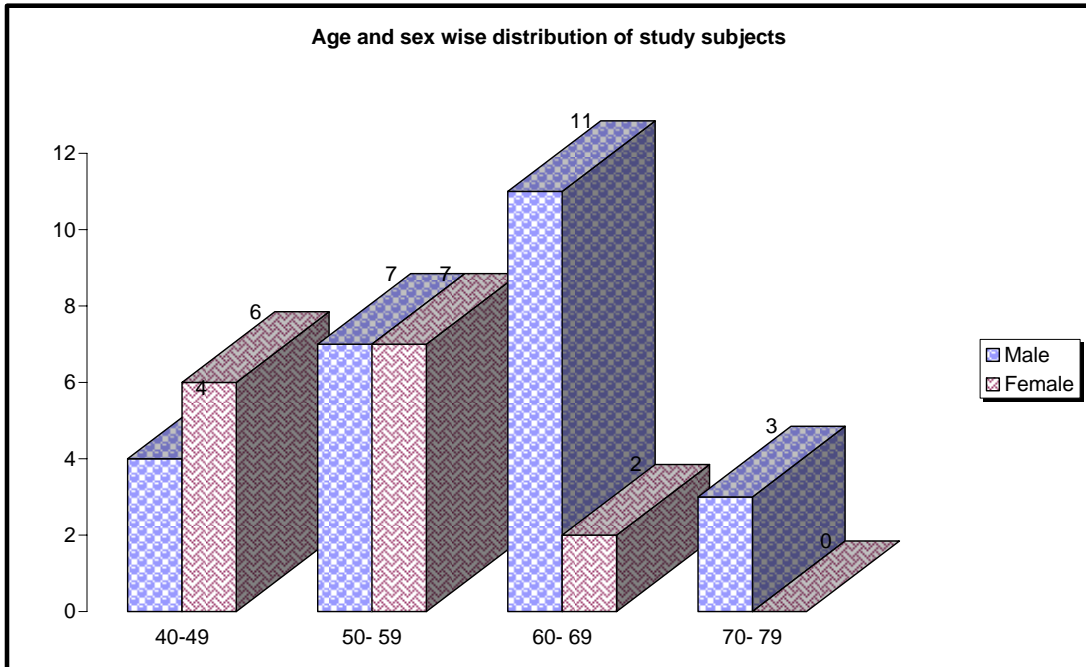
The response of the drug was studied by prognosis as good, fair and poor. The percentage of above 3 categories were given in the below table-4

Table-3. Percentage distribution of the drug, Linga Chendooram

S.NO	Prognosis	Study subject	
		NO	%
	Good	30	75
	Fair	8	20
	Poor	2	5
	Total	40	100

The above table – 3 shows that the prognosis analysis of the patients response of the drug. The prognosis analytical statistics had showed as good response on 75 % of the elements of the drug. The 20% and 5 % had shown fair and poor response respectively.

From the above results and discussion of the study of Linga Chendooram, the hypothesis of that drug was effective in curing “Azhal keel vayu” was statistically proved and accepted.



BIO – STATISTICAL ANALYSIS

COMPARISON OF THANDRIKKAI CHOORANAM AND LINGA CHENDOORAM FOR AZHAL KEEL VAYU

Matching of the study subsides of the two drugs:

The matching of the two drugs clinical trials were under the table for comparison of the two drugs to find out which one was more effective than the other. The clinical trials were matched by their sex and ages.

**Table 1. Sex and age wise matching of the study subjects
of the two drugs**

S.NO	Sex	Thandrikkai Chooranam			Linga Chendooram			Mean difference	‘t’	Significance
		N	Mean age	S.D	N	Mean age	S.D			
	Male	20	59.9	8.9	25	57.8	10.6	2.1	0.71	P>0.05
	Female	20	56.5	9.2	15	50.2	6.5	6.3	2.2	P<0.05
	Total	40	58.2	9.1	40	55.1	10	3.1	1.45	P>0.05

The above table - 1 shows the comparison two drugs in respect of the sex wise and mean age of the study subjects. While matching the mean ages of males, the difference of 2.1 years was not statistically significant (t = 0.71, d.f = 44 and p> 0.05). The mean ages of females of two drug groups were 56.5±9.2 and 50.2± 6.5 years respectively the mean difference of 6.3 years was statically significant ((t = 2.2, d.f = 32 and p> 0.05).

That means the Linga Chendooram patients of female were younger than the Thandrikkai Chooranam female patients. The total patients mean ages of two drugs were 58.2 ± 9.1 and 55.1 ± 10.0 the mean difference of 3.1 years was not statistically significant. (t = 0.145, d.f = 78 and P > 0.05).

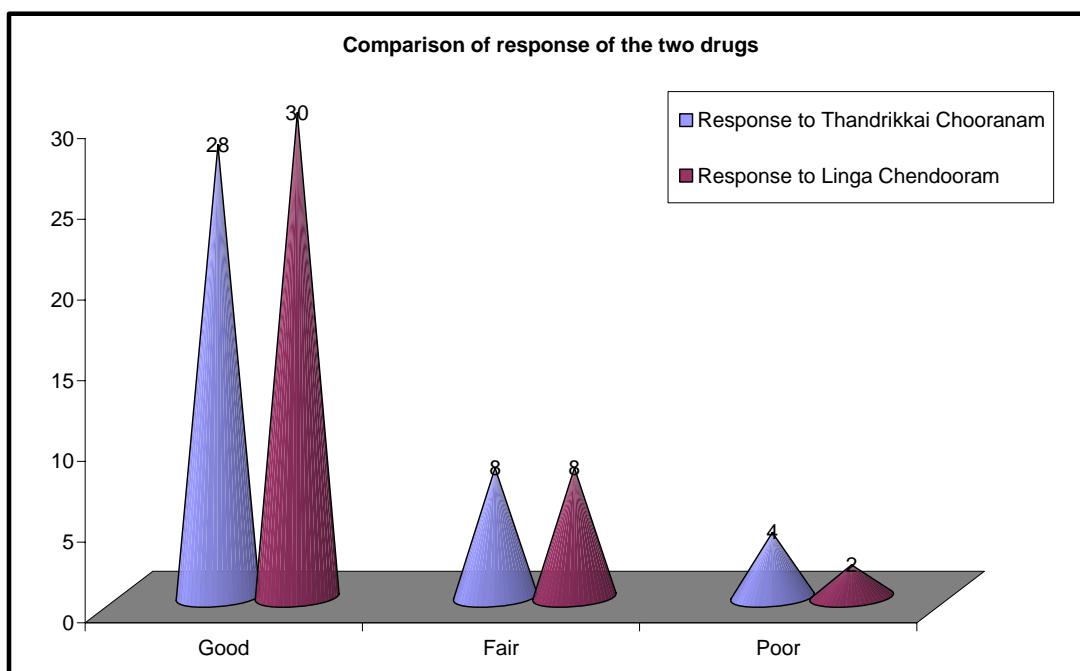
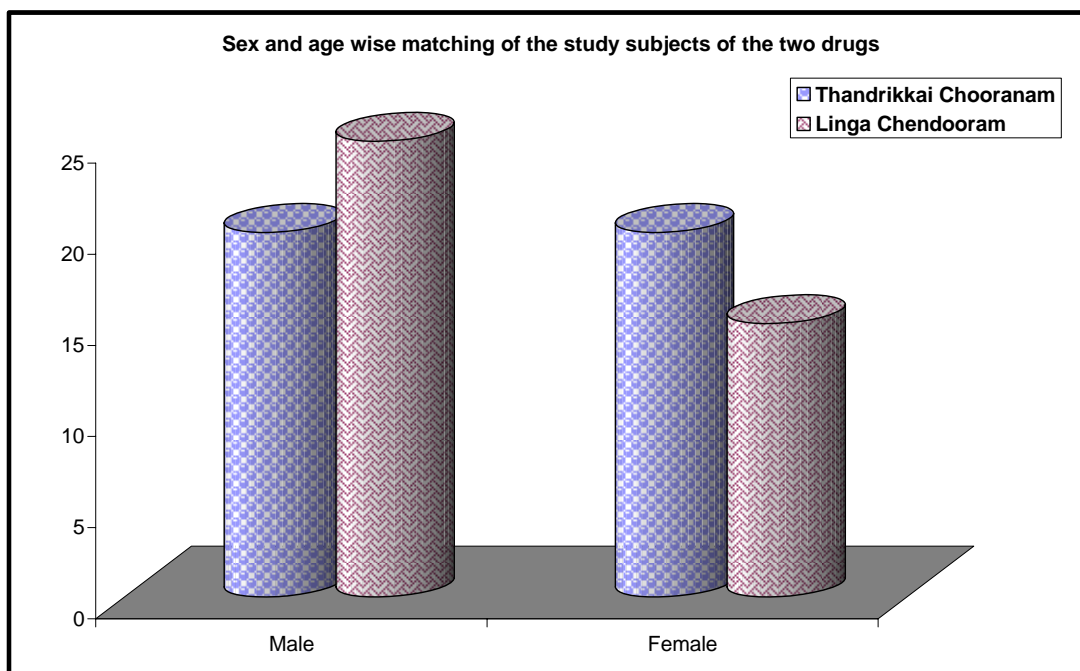
Comparison of response of the two drugs

The two drugs were compared with reference to the effectiveness of response in curing Azhal keel vayu to identify which drug was more effective than the other. The responses were posted in the below table.

Table 2. Comparison of response of the two drugs

S.NO	Prognosis	Response to Thandrikkai Chooranam		Response to Linga Chendooram		'Z'	Significance
		No	%	No	%		
	Good	28	70	30	75	0.5	P>0.05
	Fair	8	20	8	20	----	-----
	Poor	4	10	2	5	0.8856	P>0.05
	Total	4	100	40	100	-----	-----

The above comparison in the table – 2 clearly compares the effectiveness of the two drugs by their prognosis. The drug Thandrikkai Chooranam had 70 % good response in curing the disease Azhal keel Vayu where as the Linga Chendooram had 75% good response in curing the disease . the difference of the response was not statistically significant. ($Z = 0.5$ and $P > 0.05$). the two drugs seemed equal fair response as 20 % each. The poor response of the drugs were 10% in Thandrikkai Chooranam and 5 % in **Linga Chendooram**. This difference of 5 % was not statistically significant. From the fore going results and discussions, the both drugs were effectively curing the Azhal keel vayu. But both drugs were equally effectiveness and response in curing the Azhal keel vayu. There was no superiority between the two drugs in respect of their effectiveness and response.



DISCUSSION

According to many Siddha literatures Lingam has been used as potent medicine for vadha disease from ancient days.

All the bones in our body are included in a part of the **Mann bootham**. Liquid part of our body like blood, sperm etc. are also included in a part of the **Appu bootham**. In Azhal keel vayu one of the degenerative disease the knee joints are having swelling and the bones composed the knee joints are also degenerated. So the normal activities of knee joints are restricted.

According to this poem followed as,

“நிலத்திலெழுந்த பிணி நிங்காக கிரந்தி
சலத்துடனே குலை வெடிதானகற்றும்”

Lingam has been effectively curing the diseases induced in the **Mann bootham** and **Appu bootham** organs. When the linga Chendooram’ was taken by the patients, it supported well in improving the normal activities of the knee joints.

Another one proof for an anti-vadha property of lingam is, it is a poem expressing the therapeutic uses of Lingam, as followed as,

ஆதியிரவுருக் காதலாற் சாதிங்க
மோதி லிந்தகுண முற்றுடலிற் -நீதுபுரி
குட்டங் கிரந்தி கொடுஞ்சுலை வாதமுத
லுட்டங்கு நோய்களை யோட்டும்

From above that, the lingam has potent anti vadha principle. The bio chemical analysis reveals that the test drug has got Calcium, Sulphate, Chloride, unsaturated compound, Mercury.

Regarding the Azhal keel vayu patients they are generally seemed to be weakened due to disability to walk and to do day to day activities. Most of them are also deficient of calcium and it leads to friability and porosity of bones causing cracks and fracture of bones. So, the 'Linga Chendooram' content of calcium and sulphate which is needed to the formation of Keratin sulphate and chondroitin sulphate, is as supportive therapy for compensation of density loss in bones and joints in this degenerative condition and also the presence of sulphate may prevent the occurrence of any infection in the joint.

Pharmacological analysis shows that it has significant analgesic, significant acute anti-inflammatory, significant chronic anti-inflammatory properties. The therapeutic efficacy of the drug in the diseases of Azhal keel vayu revealed by exploring pharmacological action like significant anti-inflammatory and analgesic actions. It helps to relieve pain (analgesic) and reduced the inflammation (Anti-inflammatory) in soft tissues.

Acute toxicity study showed that the drug had got no acute toxic effect.

From the reference of chronic toxicity studies previously done When the test drug including Lingam was taken for a long duration, it produced hepatotoxic and nephrotoxic effects that was evident from the results of Histopathological studies.

In the anti microbial study the test drug is moderately sensitive *Escherichia coli*.

Heavy metal analysis by AAS revealed that the test drug contains all the elements which are within the normal limit of WHO.

In clinical studies patients were diagnosed as Azhal keel vayu according to Siddha aspect as well as by radiological and other investigations. They were studied at In-patient ward and out patient department of P.G. Gunapadam department of GSMC and hospital, Palayamkottai. The course of treatment varied from 25-45 days out of 40 cases, 30 patients had good relief from signs and symptoms, 8 patients had partial relief and 2 patient had no relief.

Bio statistical analysis showed that the drug was effective in curing 'Azhal Keel Vayu' was statistically proved and accepted.

Based on the result of Bio- statistical analysis, both drugs were equally effectiveness and response in curing the Azhal keel vayu. But according to the result of clinical trials the Linga Chendooram was more effective than the Thandrikkai Chooranam in curing the Azhal keel vayu.

No adverse effect was observed during the course of treatment and after withdrawal of the drug.

SUMMARY

A brief description about chemical as well as Gunapadam aspects of Lingam was discussed. The bio chemical analysis revealed that the Linga Chendooram contains calcium , sulphate, chloride, unsaturated compound and Mercury and their biological significance has been discussed.

Pharmacological studies show that drug possess significant anti-inflammatory and significant analgesic actions. It helps to relive pain (Analgesic) and reduce the inflammation (Anti- inflammatory) in soft tissues.

Accute toxicity study showed that the drug had got no acute toxic effect.

The reference of chronic toxicity study revealed that the drug including Lingam was taken for a long duration, it produced Hepatotoxic and nephrotoxic effects that was evident from the results of Histopathological studies.

In the anti-microbial studies the drug is moderately sensitive to Escherichia coli.

Heavy metal analysis by AAS revealed that the test drug contains all the elements which are with in the normal limit of WHO.

Clinical studies showed that the drug has got 75% of good response, 20% of fair response and 5% had no response.

Bio statistical analysis showed that the drug was effective in curing 'Azhai Keel Vayu' was statistically proved and accepted.

No adverse effect is obtained during the course of treatment.

CONCLUSION

It is concluded that the drug 'Linga Chendooram' is found to be effective for Azhal keel vayu clinically and it has got significant anti-inflammatory and significant analgesic effect without causing any adverse effects.

BIBLIOGRAPHY

1. K.S. Murugehsa Mudhaliyar, Gunapadam Mooligai Vagu, Indian Medicine and Homiopathy Department, Chennai -1988.
2. S.P.Ramachandhiran, Visha Pirathi Visathiratu, Thamarai publication, Chennai – 1990.
3. S.P.Ramachandhiran, Sarva Visha Murippu, Thamarai publication, Chennai – 1990.
4. S.P.Ramachandhiran, Agathiyar Arulia Vythia Kalanjium, Thamarai publication, Chennai – 1990.
5. P.Krishnarav, Sudamani Nighandu, Ayurvedha Siddhasrimam, Chennai – 1992.
6. C.Kannusamipillai, Sighicharathna deepam, Rathina nayakkar and sons, Chennai, 1993.
7. C.Kannusamipillai, Padhartha Gunavilakkam, Moola varkkam, Rathina nayakkar and sons, Chennai, 1993.
8. T.V.Sambasivam pillai, Ughi Karisal -151, Ambavilasa puthaga salai, Chennai – 1928.
9. T.V.Sambasivam pillai, Tamil-English dictionary, G.T. Naiydu publication – 1931.
10. S.Viyapuri pillai kaviraiyar , Namadeeba nighandu, G.T. Naiydu publication – 1931.
11. R.Thiyagarajan, Gunapadam- Thadhu Jeeva Vaghupu, Indian Medicine and Homeopathy Department, Chennai -1988.
12. V.Balaramiya, Sidhha marundhu Sei Peru Murigal, Aruljothi publication, Chennai -1986.
13. Abdhulla saghip, Anubhoga Vaithiya Navaneetham - part IV, Thamarai publication, Chennai – 1992.
14. Abdhulla saghip, Vera mamunivar Vagadath thirattu, Thamarai publication, Chennai – 1992.

15. Abdhulla saghip, Agathiyar pallu -200, Thamarai publication, Chennai – 1992.
16. S.P. Ramachandhiran, Sattaimuni Nighandu, Thamarai publication, Chennai – 1992.
17. S.P. Ramachandhiran, Bohar Nigahandu -1700, Thamarai publication, Chennai – 1992.
18. S.P. Ramachandhiran, Agathiyar Panja kavia Nighandu, Thamarai publication, Chennai – 1992.
19. S.P. Ramachandhiran, Pathartha Guna Sondhamani, Thamarai publication, Chennai – 1992.
20. S.P. Ramachandhiran, Pulathiyar Vadha Suthiram-300, Thamarai publication, Chennai – 1992.
21. J.Seetharam Prasath, Anubava Vithiya Deva Raghashium, Thamarai publication, Chennai – 1992.
22. S.Venkatarajan, Agathiyar Erandaieram, Thamarai publication, Chennai – 2002.
23. S.Egaambara Muthaliyar, Vathiya Arichuvadi, Rathina nayakkar and sons, Chennai, 1991.
24. S.P.Ramachandiran, Yachobu Vithiya Sindhamani -700, Thamarai publication, Chennai – 1998.
25. S.P.Ramachandiran, Dhanvanthiri Bahavan Vaithiya Kaviam-1000, Thamarai publication, Chennai – 1997.
26. S.P.Ramachandiran, Agathiyar Vaithiya rathin Churukkam-360, Thamarai publication, Chennai – 1994.
27. S.S. Bhatnagar, The Wealth of India – Vol X, CISR, Newdelhi
28. R.N. Chopra and I.C.Chopra, Glossary of Indian medicinal Plants, CISR, New delhi, 1992.
29. K.M.Nadkarni, The Indian Metaria Medica, Vol. I and II, Bombay Popular B.Prakasham, 1996.
30. P.D.Krithikar and Basu, Medicinal plants of Indiam Vol I.

31. J.S. Gamble, Flora of the Presidency of Madras, Edition 1, 1935, Reprint, 1987, Bishen singh, Mahendra pal Singh, Dehradun -1987.
32. Kandasamy Pillai, History of Siddha Medicine, Government of Tamilnadu, 1979.
33. M.Shanmugavelu, Siddhars Science of Longevity, Directorate of Indian Medicine and Homeopathy, Madras 1992.
34. Pharmacopeia of Hospital of Indian Medicine(Sidhha), Directorate of Indian Medicine and Homeopathy, Madras 1992.
35. Ram.P.Rastogi and B.N.Marhotra, Compendium of Indian medicinal Plants Vol I, II, III, IV, V, CDRI, Lucknow
36. S.Kannusamypillai, Materia Medica (Vegetable Kingdom) part I, Directorate of Indian Medicine and Homeopathy, Madras.
37. S.Kannusamypillai, Materia Medica (Mineral and Animal Kingdom) part II, Directorate of Indian Medicine and Homeopathy, Madras.
38. Rashtra Vardhana, Floristic Plants of the world Vol –III, 2006 publication.
39. P.C.Trivedi, Medicinal plants, 2006 publication
40. G.Prasad and M.V Reshmi, A manual of medicinal trees, 2003 publication
41. Purshotam Kaushic and Anil Kumar Dhiman, Medicinal plants and raw drugs of India
42. R.N.Khori and N.. katrak, Materia medica of India and their Therapeutics, 1999 publication.
43. V.K.Singh and Abrar M.Khan, Medicnal plants and Folklores, 1990 publication.
44. The Ayuvedic Pharmacopoeia of India Vol-I, Government of India, 1990.

45. E.M.Gopala Krishna kon, Madurai Tamil Perragarathi
46. Perunjollagarathi Vol I, Tamil University, Tanjor 1988.
47. Theiyar Kappiam, Elakkia Arachithurai, 1975.
48. Vithiya Perunkural, Devendhira Nadha Pandither.

Websites

49. <http://www.mididea.com/products/proper/proper060.html>.
50. <http://gallery.bighal.com/showphoto.php>
51. <http://www.taninst.net/myanmedplants/tic/famc/combretacae.htm>
52. www.toddcaldcott.com/vibhitaki.html
53. www.pharmainfo.net/exclusive/reviews/triphalareputedherbalformulation/1

OUT PATIENTS

Name	Jaya lakshmi	Age/Sex	46/F	O.P.No.	34160	From	30/05/08	To	12/7/08	No. of days Treated	44	
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(RIGHT)				
Complaints and duration		Pain and swelling in the right knee joint since 2 months					Occupation	House wife				
			Before treatment		After treatment		Investigation					
							Before treatment			After treatment		
			Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings		
1. Pain			++	-	-	-	TC : 9400 cell/cumm DC : P 68% L25% E 7% ESR ½ hour 15 mm 1 hour 30 mm Hb 60%	Subchondral sclerosis. Impression : right knee joint osteoarthritis	TC : 9600 cell/cumm DC : P 62% L.35% E3% ESR ½ hour 12mm 1 hour 24mm Hb 64%	Subchondral sclerosis. Impression : right knee joint osteoarthritis		
2. Stiffness			-	-	-	-						
3. Limitation of movement (30°-I, 60°-II, 60°<)			II	-	-	-		URINE : Albumin : NIL Sugar : NIL Deposit : 2-3 pus cells			Bl. Sugar (R) 110 mg% Bl. Urea 25mg% S.Cholesterol 174 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD
4. Measurement			36.5cm	36cm	36cm	36cm						
5. Tenderness			-	-	-	-	Bl. Sugar (R) 86mg% Bl. Urea 19mg% S. Cholesterol 170 mg%					
6. Crepitation on movements			+	-	+	-						
7. Swelling			++	-	-	-						
8. Taking time to walk for 100 feet distance			58sec		50sec		Response: GOOD					

Name	Suppya	Age/Sex	70/M	O.P.No.	34377	From	31/05/08	To	17/7/08	No. of days Treated	48
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 5 months				Occupation	Farmer				
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings	
1. Pain			+++	++	-	-	TC : 9600 cell/cumm DC : P 68% L28% E 4% ESR ½ hour 8 mm 1 hour 16 mm Hb 88%	Joint space narrowing Impression : Bilateral osteoarthritis	TC : 9800 cell/cumm DC : P 64% L.32% E4% ESR ½ hour 6mm 1 hour 12mm Hb 86%	Joint space narrowing Impression : Bilateral osteoarthritis	
2. Stiffness			+	+	-	-					
3. Limitation of movement (30°-I, 60°-II, 60°<)			I	II	-	-					
4. Measurement			44cm	44cm	43cm	43cm					
5. Tenderness			-	-	-	-	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Hb 86% Bl. Sugar (R) 198 mg% Bl. Urea 28mg% S.Cholesterol 180 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD		
6. Crepitation on movements			+	+	+	+					
7. Swelling			+	+	-	-					
8. Taking time to walk for 100 feet distance			65sec		58sec		Response: GOOD				

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Edward	Age/Sex	61/M	O.P.No.	34772	From	1/6/08	To	3/7/08	No. of days Treated	33
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 2 months					Occupation	Retired teacher			
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood		Radiological findings	Blood	
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			++	++	++	++	TC : 9000 cell/cumm DC : P 60% L35% E 5% ESR ½ hour 10 mm 1 hour 20 mm Hb 81%	Joint space narrowing Impression : Bilateral osteoarthritis	TC : 9300 cell/cumm DC : P 66% L.31% E 3% ESR ½ hour 9 mm 1 hour 18 mm Hb 83%	Joint space narrowing Impression : Bilateral osteoarthritis	
			I	II	I	II					
			37cm	37cm	37cm	37cm					
			+-	+	+	+					
			+	+	+	+	Bl. Sugar (R) 88mg% Bl. Urea 36mg% S. Cholesterol 192 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : 1-2 pus cells	Bl. Sugar (R) 92 mg% Bl. Urea 32mg% S.Cholesterol 188 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
			+	+	+	+					
			8. Taking time to walk for 100 feet distance			66sec		62sec		Response: POOR	

Name	Sendu	Age/Sex	51/F	O.P.No.	35696	From	7/06/08	To	19/7/08	No. of days Treated	43			
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)						
Complaints and duration		Pain in both knee joint since 5 months					Occupation	House servant						
			Before treatment		After treatment		Investigation							
							Before treatment			After treatment				
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings		
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			++	++	-	-	TC : 9000 cell/cumm DC : P 53% L45% E 2% ESR ½ hour 12 mm 1 hour 24 mm Hb 72%		Marginal osteopytes Impression : Bilateral osteoarthritis	TC : 9400 cell/cumm DC : P 60% L.36% E 4% ESR ½ hour 8mm 1 hour 18mm Hb 74%		Marginal osteopytes Impression : Bilateral osteoarthritis		
			34cm	34cm	34cm	34cm	Bl. Sugar (R) 87mg% Bl. Urea 28mg% S. Cholesterol 194 mg%			Bl. Sugar (R) 90 mg% Bl. Urea 26mg% S.Cholesterol 192 mg%				
			-	-	-	-	URINE : Albumin : NIL Sugar : NIL Deposit : NAD		Bl. Sugar (R) 90 mg% Bl. Urea 26mg% S.Cholesterol 192 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD			
			+	+	+	+								
			-	-	-	-								
			8. Taking time to walk for 100 feet distance			68sec		56 sec		Response: GOOD				

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Muppidathi	Age/Sex	48/F	O.P.No.	36877	From	13/6/08	To	28/7/08	No. of days Treated	46	
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)				
Complaints and duration		Pain in both knee joint since 3 years					Occupation	Farmer				
			Before treatment		After treatment		Investigation					
							Before treatment			After treatment		
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain			++	++	++	++	TC : 8700 cell/cumm		Joint space narrowing Marginal osteopytes Impression : Bilateral osteoarthritis	TC : 9000 cell/cumm		Joint space narrowing Marginal osteopytes Impression : Bilateral osteoarthritis
2. Stiffness			+	+	+	+	DC : P 69% L28% E 1%			DC : P 67% L.30% E 3%		
3. Limitation of movement (30°-I, 60°-II, 60°<)			II	II	II	II	ESR			ESR		
4. Measurement			40 cm	40cm	40cm	40cm	½ hour 12 mm			½ hour 10mm		
5. Tenderness			-	-	-	-	1 hour 25 mm		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	1 hour 20 mm		URINE : Albumin : NIL Sugar : NIL Deposit : NAD
6. Crepitation on movements			+	+	+	+	Hb 78%			Hb 80%		
7. Swelling			+	+	+	+	Bl. Sugar (R) 88mg%			Bl. Sugar (R) 90 mg%		
			-	-	-	-	Bl. Urea 24mg%			Bl. Urea 265mg%		
							S. Cholesterol 178 mg%			S.Cholesterol 180 mg%		
8. Taking time to walk for 100 feet distance			63sec		60sec		Response: POOR					

Name	Suppiya	Age/Sex	65/M	O.P.No.	37342	From	16/6/08	To	25/07/08	No. of days Treated	40
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(LEFT)			
Complaints and duration		Pain in the left knee joint since 3 months					Occupation	Tailor			
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood		Radiological findings	Blood	
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling 8. Taking time to walk for 100 feet distance			-	++	-	-	TC : 9200 cell/cumm DC : P 60% L36% E 4% ESR ½ hour 8 mm 1 hour 16 mm Hb 74%	Reduced joint space Soft tissue swelling Impression : Left knee joint osteoarthritis	TC : 9400 cell/cumm DC : P 62% L.35% E 2% ESR ½ hour 6 mm 1 hour 12 mm Hb 76 %	Reduced joint space Reduced Soft tissue swelling Impression : Left knee joint osteoarthritis	
			38 cm	38cm	38cm	38cm	Bl. Sugar (R) 101mg% Bl. Urea 28mg% S. Cholesterol 201 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 103 mg% Bl. Urea 26 mg% S.Cholesterol 198 mg%	Albumin : NIL Sugar : NIL Deposit : NAD	
			-	-	-	-					
			-	+	-	+					
			-	-	-	-					
			68sec		56sec						

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Suppammal	Age/Sex	80/F	O.P.No.	37374	From	16/06/08	To	31/07/08	No. of days Treated	46			
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)						
Complaints and duration		Pain and swelling in the left knee joint since 3 months					Occupation	House wife						
			Before treatment		After treatment		Investigation							
							Before treatment			After treatment				
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings		
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			-	++	-	-	TC : 9200 cell/cumm DC : P 68% L30 % E 2% ESR ½ hour 7 mm 1 hour 13 mm Hb 68%		Subchondral sclerosis. Impression : Left knee joint osteoarthritis	TC : 9400 cell/cumm DC : P 66% L.30% E 4% ESR ½ hour 6 mm 1 hour 12 mm Hb 70%		Subchondral sclerosis. Impression : Left knee joint osteoarthritis		
			35 cm	36cm	35cm	35cm	Bl. Sugar (R) 85mg% Bl. Urea 26mg% S. Cholesterol 191 mg%			URINE : Albumin : NIL Sugar : NIL Deposit : NAD				
			-	-	-	-								
			-	+	-	+								
			-	+	-	-								
			8. Taking time to walk for 100 feet distance		72 sec		65 sec							
													Response: GOOD	

Name	Raman	Age/Sex	52/M	O.P.No.	37630	From	17/06/08	To	2/8/08	No. of days Treated	47		
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)					
Complaints and duration		Pain and swelling in both knee joint since 1 months				Occupation	Driver						
			Before treatment		After treatment		Investigation						
							Before treatment			After treatment			
			Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings			
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			++	++	-	-	TC : 9200 cell/cumm DC : P 64% L32% E 4% ESR ½ hour 7 mm 1 hour 14 mm Hb 81%	Marginal ostopytes Impression : Bilateral osteoarthritis	TC : 9400 cell/cumm DC : P 68% L.30% E 2% ESR ½ hour 6 mm 1 hour 14 mm Hb 82%	Marginal ostopytes Impression : Bilateral osteoarthritis			
			38cm	38.5cm	38cm	38cm							
			+	-	-	-	Bl. Sugar (R) 90mg% Bl. Urea 26 mg% S. Cholesterol 192 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 88 mg% Bl. Urea 24mg% S.Cholesterol 190 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD			
			+	+	+	+							
			+	-	-	-							
			8. Taking time to walk for 100 feet distance			68 sec		56 sec		Response: GOOD			

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Mazith Abubakkar	Age/Sex	65/M	O.P.No.	39005	From	24/06/08	To	2/8/08	No. of days Treated	40
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 4 months				Occupation	Fruit seller				
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood		Radiological findings	Blood	
1. Pain			+++	++-	-	-	TC : 8600 cell/cumm DC : P 65% L33 % E 2% ESR ½ hour 6 mm 1 hour 12 mm Hb 81%	Joint space narrowing Subchondral sclerosis. Impression : Bilateral osteoarthritis	TC : 9000 cell/cumm DC : P 68% L.30% E 2% ESR ½ hour 5 mm 1 hour 10 mm Hb 82 %		Joint space narrowing Subchondral sclerosis. Impression : Bilateral osteoarthritis
2. Stiffness			++	+	-	-					
3. Limitation of movement (30°-I, 60°-II, 60°<)			II	II	-	-					
4. Measurement			39 cm	39cm	38cm	38cm					
5. Tenderness			+	+	-	-	Bl. Sugar (R) 82 mg% Bl. Urea 24 mg% S. Cholesterol 202 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 84 mg% Bl. Urea 25mg% S.Cholesterol 200 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD
6. Crepitation on movements			+	+	+	+					
7. Swelling			++	++	-	-					
8. Taking time to walk for 100 feet distance			66 sec		54 sec						
									Response: GOOD		

Name	Ramihza	Age/Sex	45/F	O.P.No.	39503	From	26/6/08	To	11/08/08	No. of days Treated	47			
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)						
Complaints and duration		Pain and swelling in both knee joint since 8 months				Occupation		House wife						
			Before treatment		After treatment		Investigation							
							Before treatment			After treatment				
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings		
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			++	+++	-	+	TC : 9500 cell/cumm DC : P 67% L30% E 3% ESR ½ hour 7 mm	Joint space narrowing Impression : Bilateral osteoarthritis	TC : 9800 cell/cumm DC : P 62% L.34% E 4% ESR ½ hour 6mm 1 hour 12 mm		Joint space narrowing Impression : Bilateral osteoarthritis			
			38cm	38cm	37cm	37cm	1 hour 14 mm							
			-	-	-	-	Hb 71%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Hb 73%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD				
			+	+	+	+	Bl. Sugar (R) 97mg%		Bl. Sugar (R) 98 mg%					
			++	++	-	+	Bl. Urea 28 mg%		Bl. Urea 26 mg%					
			8. Taking time to walk for 100 feet distance			60sec		50sec		S. Cholesterol 182 mg%		S.Cholesterol 180 mg%		
												Response: FAIR		

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Meri	Age/Sex	65/F	O.P.No.	39750	From	27/06/08	To	11/08/08	No. of days Treated	45		
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(LEFT)					
Complaints and duration		Pain and swelling in the left knee joint since 3 years				Occupation	COOKER						
			Before treatment		After treatment		Investigation						
							Before treatment			After treatment			
			Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings			
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			-	+++	-	+++	TC : 9000 cell/cumm DC : P 58% L40% E 2% ESR ½ hour 10 mm 1 hour 20 mm	Joint space narrowing Impression : Left knee joint osteoarthritis	TC : 9200 cell/cumm DC : P 60% L.38% E 2% ESR ½ hour 9mm 1 hour 18 mm	Joint space narrowing Impression : Left knee joint osteoarthritis			
			38cm	39cm	38cm	39cm							
			-	+	-	+	Hb 70%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Hb 72%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD			
			-	+	-	+	Bl. Sugar (R) 102mg%		Bl. Sugar (R) 104 mg%				
			-	++	-	++	Bl. Urea 36mg%		Bl. Urea 34mg%				
			8. Taking time to walk for 100 feet distance			66sec		64sec		S. Cholesterol 188 mg%		S.Cholesterol 186 mg%	Response: POOR

Name	Arumugavadivu	Age/Sex	65/F	O.P.No.	40482	From	1/7/08	To	9/8/08	No. of days Treated	39
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 6 months				Occupation	House wife				
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings	
1. Pain			++	+	-	-	TC : 8900 cell/cumm DC : P 59 % L 40 % E 1% ESR ½ hour 8 mm 1 hour 16 mm Hb 74% Bl. Sugar (R) 86mg% Bl. Urea 28mg% S. Cholesterol 196 mg%	Subchondral sclerosis. Soft tissue swelling Impression : Bilateral osteoarthritis	TC : 9200 cell/cumm DC : P 62% L.36% E 2% ESR ½ hour 6 mm 1 hour 12 mm Hb 75 % Bl. Sugar (R) 88 mg% Bl. Urea 25mg% S.Cholesterol 192 mg%	Subchondral sclerosis. Reduced Soft tissue swelling Impression : Bilateral osteoarthritis	
2. Stiffness			+	+	-	-					
3. Limitation of movement (30°-I, 60°-II, 60°<)			II	I	-	-					
4. Measurement			41cm	41cm	40cm	40.5cm					
5. Tenderness			-	+	-	-					
6. Crepitation on movements			+	+	+	+					
7. Swelling			+	++	-	-					
8. Taking time to walk for 100 feet distance			72 sec		66 sec						
									Response: GOOD		

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Beer Mohammed	Age/Sex	50/M	O.P.No.	40569	From	1/7/08	To	11/08/08	No. of days Treated	41	
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)				
Complaints and duration		Pain and swelling in both knee joint since 2 months					Occupation	Butcher				
			Before treatment		After treatment		Investigation					
							Before treatment			After treatment		
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain			++	++	-	-	TC : 9200 cell/cumm		Joint space narrowing Subchondral sclerosis. Impression : Bilateral osteoarthritis	TC : 9500 cell/cumm		Joint space narrowing Subchondral sclerosis. Impression : Bilateral osteoarthritis
2. Stiffness			+	+	-	-	DC : P 60% L35% E 5%			DC : P 64% L.30% E 6%		
3. Limitation of movement (30°-I, 60°-II, 60°<)			I	I	-	-	ESR			ESR		
4. Measurement			38cm	38.5cm	37cm	37.5cm	1/2 hour 7 mm			1/2 hour 5mm		
5. Tenderness			+	+	-	-	1 hour 14 mm		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	1 hour 10mm		URINE : Albumin : NIL Sugar : NIL Deposit : NAD
6. Crepitation on movements			+	+	+	+	Hb 74%			Hb 76%		
7. Swelling			+	+	+	+	Bl. Sugar (R) 86mg%			Bl. Sugar (R) 89mg%		
			+++	+	-	-	Bl. Urea 38mg%			Bl. Urea 35mg%		
							S. Cholesterol 220 mg%			S.Cholesterol 215 mg%		
8. Taking time to walk for 100 feet distance			68sec		56sec		Response: GOOD					

Name	Nellai vadivu	Age/Sex	57/F	O.P.No.	43127	From	14/07/08	To	20/8/08	No. of days Treated	37				
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(RIGHT)							
Complaints and duration		Pain and swelling in the right knee joint since 3 years				Occupation		Flower seller							
				Before treatment		After treatment		Investigation							
								Before treatment		After treatment					
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings				
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling				+++	-	+++	-	TC : 9400 cell/cumm DC : P 68% L30% E 2% ESR ½ hour 7 mm	Joint space narrowing Impression : Right knee joint osteoarthritis	TC : 9500 cell/cumm DC : P 62% L.34% E 4% ESR ½ hour 6 mm	Joint space narrowing Impression : Right knee joint osteoarthritis				
				38 cm	37cm	38cm	37cm	1 hour 15 mm		1 hour 12 mm					
				++	-	++	-	Hb 70%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Hb 72 %	Bl. Sugar (R) 86 mg% Bl. Urea 26mg% S.Cholesterol 215 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD			
				+	-	+	-	Bl. Sugar (R) 85mg%							
				++	-	++	-	Bl. Urea 28mg%							
				8. Taking time to walk for 100 feet distance				60sec		58sec		S. Cholesterol 218 mg%			
												Response: POOR			

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Sedhu	Age/Sex	54/M	O.P.No.	44137	From	18/7/08	To	30/8/08	No. of days Treated	48
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(RIGHT)			
Complaints and duration		Pain and swelling in the right knee joint since 7 months					Occupation	Daily labour			
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings	
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling 8. Taking time to walk for 100 feet distance			++	-	+	-	TC : 8700 cell/cumm DC : P 59% L40% E 1% ESR ½ hour 12 mm 1 hour 24 mm Hb 68%	Subchondral sclerosis. Impression : Right knee joint osteoarthritis	TC : 9000 cell/cumm DC : P 64% L.33% E3% ESR ½ hour 10mm 1 hour 20mm Hb 70%	Subchondral sclerosis. Impression : Right knee joint osteoarthritis	
			39cm	38cm	38.5cm	38cm	Bl. Sugar (R) 106mg% Bl. Urea 29mg% S. Cholesterol 188 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 102 mg% Bl. Urea 25mg% S.Cholesterol 186 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
			+	-	-	-					
			+	-	+	+					
			++	-	-	-					
			58sec		53sec						
							Response: GOOD				

Name	Sankaran	Age/Sex	49/M	O.P.No.	44159	From	18/7/08	To	30/08/08	No. of days Treated	48
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain in both knee joint since 1 months					Occupation	Electrician			
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood		Radiological findings	Blood	
1. Pain			++	++	-	-	TC : 8800 cell/cumm	Joint space narrowing	TC : 9100 cell/cumm	Joint space narrowing	
2. Stiffness			+	+	-	-	DC : P 55% L40% E 5%	Impression :	DC : P 60% L.35% E 5%	Impression :	
3. Limitation of movement (30°-I, 60°-II, 60°<)			I	II	-	-	ESR	Bilateral	ESR	Bilateral	
4. Measurement			35cm	35cm	35cm	35cm	½ hour 7 mm	osteoarthritis	½ hour 5mm	osteoarthritis	
5. Tenderness			-	-	-	-	1 hour 14 mm		1 hour 9 mm		
6. Crepitation on movements			-	-	-	-	Hb 76%	URINE :	Hb 78 %	URINE :	
7. Swelling			+	+	+	+	Bl. Sugar (R) 87mg%	Albumin : NIL	Bl. Sugar (R) 89 mg%	Albumin : NIL	
			-	-	-	-	Bl. Urea 32mg%	Sugar : NIL	Bl. Urea 28mg%	Sugar : NIL	
							S. Cholesterol 198 mg%	Deposit : NAD	S.Cholesterol 195 mg%	Deposit : NAD	
8. Taking time to walk for 100 feet distance			68sec		52 sec					Response: GOOD	

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Esakkiammal	Age/Sex	60/F	O.P.No.	44736	From	21/07/08	To	2/9/08	No. of days Treated	43
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 1 year				Occupation	Daily labour				
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings	
1. Pain			+++	++	-	-	TC : 8700 cell/cumm	Subchondral sclerosis.	TC : 9000 cell/cumm	Subchondral sclerosis.	
2. Stiffness			+	+	-	-	DC : P 59% L40% E 1%	Impression :	DC : P 64% L.33% E3%	Impression :	
3. Limitation of movement (30°-I, 60°-II, 60°<)			II	I	-	-	ESR	Bilateral	ESR	Bilateral	
4. Measurement			39cm	39cm	38cm	38cm	½ hour 12 mm	osteoarthritis	½ hour 10mm	osteoarthritis	
5. Tenderness			+	+	-	-	1 hour 24 mm		1 hour 20mm		
6. Crepitation on movements			+	+	+	+	Hb 68%	URINE :	Hb 70%	URINE :	
7. Swelling			+	++	-	-	Bl. Sugar (R) 106mg%	Albumin : NIL	Bl. Sugar (R) 102 mg%	Albumin : NIL	
							Bl. Urea 29mg%	Sugar : NIL	Bl. Urea 25mg%	Sugar : NIL	
							S. Cholesterol 188 mg%	Deposit : NAD	S.Cholesterol 186 mg%	Deposit : NAD	
8. Taking time to walk for 100 feet distance			56sec		47sec					Response: GOOD	

Name	Karpagam	Age/Sex	52/F	O.P.No.	44921	From	22/7/08	To	4/9/08	No. of days Treated	44
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration	Pain and swelling in both knee joint since 5 months						Occupation	House wife			
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings	
1. Pain			++	++	-	-	TC : 8000 cell/cumm	Joint space narrowing	TC : 8200 cell/cumm	Joint space narrowing	
2. Stiffness			+	+	-	-	DC : P 608% L30% E 8%	Marginal osteopytes	DC : P 64% L.32% E4 %	Marginal osteopytes	
3. Limitation of movement (30°-I, 60°-II, 60°<)			I	II	-	-	ESR	Impression :	ESR	Impression :	
4. Measurement			37cm	36.5cm	36cm	36cm	½ hour 9 mm	Bilateral osteoarthritis	½ hour 7mm	Bilateral osteoarthritis	
5. Tenderness			+	+	-	-	1 hour 20 mm		1 hour 144mm		
6. Crepitation on movements			+	+	+	+	Hb 68%	URINE :	Hb 70%	URINE :	
7. Swelling			++	+	-	-	Bl. Sugar (R) 806mg%	Albumin : NIL	Bl. Sugar (R) 81 mg%	Albumin : NIL	
							Bl. Urea 31mg%	Sugar : NIL	Bl. Urea 28mg%	Sugar : NIL	
							S. Cholesterol 222 mg%	Deposit :1-2 pus cells	S.Cholesterol 220 mg%	Deposit : NAD	
8. Taking time to walk for 100 feet distance			60sec		50sec		Response: GOOD				

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Fathima	Age/Sex	45/F	O.P.No.	45140	From	23/7/08	To	30/8/08	No. of days Treated	39			
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)						
Complaints and duration		Pain and swelling in both knee joint since 6 months				Occupation	House wife							
			Before treatment		After treatment		Investigation							
							Before treatment			After treatment				
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings		
1. Pain			++	+++	-	-	TC : 9200 cell/cumm		Subchondral sclerosis.		TC : 9400 cell/cumm		Subchondral sclerosis.	
2. Stiffness			+	+	-	-	DC : P 60% L35% E 5%		Marginal osteopytes		DC : P 64% L.30% E 6%		Marginal osteopytes	
3. Limitation of movement (30°-I, 60°-II, 60°<)			I	I	-	-	½ hour 12 mm		Impression : Bilateral osteoarthritis		½ hour 10mm		Impression : Bilateral osteoarthritis	
4. Measurement			37cm	37.5cm	36cm	36.5cm	1 hour 24 mm				1 hour 20 mm			
5. Tenderness			+	+	-	-	Hb 70%				Hb 71%			
6. Crepitation on movements			+	+	+	+	Bl. Sugar (R) 82mg%		URINE :		Bl. Sugar (R) 86 mg%		URINE :	
7. Swelling			+	++	-	-	Bl. Urea 38mg%		Albumin : NIL		Bl. Urea 36mg%		Albumin : NIL	
8. Taking time to walk for 100 feet distance			64 sec		52sec		S. Cholesterol 212 mg%		Sugar : NIL Deposit : 1-3 epithelial cells		S.Cholesterol 210 mg%		Sugar : NIL	
											Response: GOOD		Deposit : NAD	

Name	Kathiza	Age/Sex	55/F	O.P.No.	45138	From	24/7/08	To	30/8/08	No. of days Treated	38			
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)						
Complaints and duration		Pain and swelling in both knee joint since 1 year				Occupation	House wife							
				Before treatment		After treatment		Investigation						
								Before treatment		After treatment				
				Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings	
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling				++	++	+	-	TC : 9200 cell/cumm DC : P 68% L30 % E 2% ESR ½ hour 8 mm 1 hour 20 mm		Subchondral sclerosis. Impression : Bilateral osteoarthritis	TC : 9400 cell/cumm DC : P 65% L.30% E 5% ESR ½ hour 5mm 1 hour 12mm		Subchondral sclerosis. Impression : Bilateral osteoarthritis	
				I	II	I	-	Hb 69%			Hb 71%			
				42cm	42cm	41.5cm	41cm	Bl. Sugar (R) 101mg% Bl. Urea 27mg% S. Cholesterol 216 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 98 mg% Bl. Urea 25mg% S.Cholesterol 213 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
				+	+	-	-							
				+	+	+	+							
				+	+	-	-							
				8. Taking time to walk for 100 feet distance				58sec		48 sec				Response: FAIR

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Balammal	Age/Sex	50/F	O.P.No.	45397	From	24/7/08	To	2/9/08	No. of days Treated	40
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 6 months				Occupation	Flower seller				
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings	
1. Pain			++	+++	-	-	TC : 9200 cell/cumm	Joint space narrowing	TC : 9400 cell/cumm	Joint space narrowing	
2. Stiffness			+	+	-	-	DC : P 55% L43% E 3%	Impression :	DC : P 60% L.35% E 5%	Impression :	
3. Limitation of movement (30°-I, 60°-II, 60°<)			I	II	-	-	ESR	Bilateral	ESR	Bilateral	
4. Measurement			39cm	39cm	38cm	38cm	½ hour 8 mm	osteoarthritis	½ hour 6mm	osteoarthritis	
5. Tenderness			+	+	-	-	1 hour 17 mm		1 hour 12 mm		
6. Crepitation on movements			+	+	+	+	Hb 71%	URINE :	Hb 72%	URINE :	
7. Swelling			++	+	-	-	Bl. Sugar (R) 108mg%	Albumin : NIL	Bl. Sugar (R) 105 mg%	Albumin : NIL	
							Bl. Urea 27mg%	Sugar : NIL	Bl. Urea 25mg%	Sugar : NIL	
							S. Cholesterol 212 mg%	Deposit : NAD	S.Cholesterol 208 mg%	Deposit : NAD	
8. Taking time to walk for 100 feet distance			68sec		60 sec					Response: GOOD	

Name	Srinivasan	Age/Sex	55/M	O.P.No.	45468	From	24/7/08	To	4/9/08	No. of days Treated	42					
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)								
Complaints and duration		Pain and swelling in both knee joint since 1 year				Occupation		Butler								
				Before treatment		After treatment		Investigation								
								Before treatment		After treatment						
				Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings			
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling				++	++	-	-	TC : 9100 cell/cumm DC : P 60% L36% E 4% ESR ½ hour 12 mm 1 hour 24 mm Hb 77%		Marginal osteopytes Impression : Bilateral osteoarthritis	TC : 9200 cell/cumm DC : P 64% L.34% E 2% ESR ½ hour 8mm 1 hour 17mm Hb 77%		Marginal osteopytes Impression : Bilateral osteoarthritis			
				37cm	37.5cm	36cm	36.5cm				112mg% 32mg% 178 mg%			108 mg% 30mg% 180 mg%		
				+	+	-	-				URINE : Albumin : NIL Sugar : NIL Deposit : NAD			Bl. Sugar (R) Bl. Urea S.Cholesterol		URINE : Albumin : NIL Sugar : NIL Deposit : NAD
				+	+	+	+									
				8. Taking time to walk for 100 feet distance				64 sec		55sec		Response: GOOD				

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Esakkiammal	Age/Sex	65/F	O.P.No.	45506	From	25/07/08	To	4/9/08	No. of days Treated	40		
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(RIGHT)					
Complaints and duration		Pain and swelling in the right knee joint since 2 months				Occupation	Farmer						
				Before treatment		After treatment		Investigation					
								Before treatment		After treatment			
				Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling				+++	+	++	-	TC : 8800 cell/cumm DC : P 64% L30% E 6% ESR ½ hour 6 mm 1 hour 12 mm Hb 72%		Subchondral sclerosis. Joint space narrowing Impression : Bilateral osteoarthritis	TC : 9000 cell/cumm DC : P 68% L.28% E4% ESR ½ hour 4mm 1 hour 8mm Hb 73%		Subchondral sclerosis. Joint space narrowing Impression : Bilateral osteoarthritis
				39cm	39cm	38cm	38cm	Bl. Sugar (R) 86mg% Bl. Urea 23mg% S. Cholesterol 180 mg%			Bl. Sugar (R) 88 mg% Bl. Urea 25mg% S.Cholesterol 181mg%		
				+	+	+	-	URINE : Albumin : NIL Sugar : NIL Deposit : NAD		Response: FAIR			
				+	+	+	+						
				++	+	+	-						
				8. Taking time to walk for 100 feet distance		68sec		62sec					

Name	Hamitha Beevi	Age/Sex	55/F	O.P.No.	45577	From	25/7/08	To	4/9/08	No. of days Treated	40
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 4 months				Occupation		Tailor			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling 8. Taking time to walk for 100 feet distance				++	++	-	-	TC : 8900 cell/cumm DC : P 69% L30% E 1% ESR ½ hour 7 mm 1 hour 14 mm Hb 69%	Joint space narrowing Marginal osteopytes Impression : Bilateral osteoarthritis	TC : 9200 cell/cumm DC : P 66% L.31% E 2 % ESR ½ hour 5mm 1 hour 10 mm Hb 71%	Joint space narrowing Marginal osteopytes Impression : Bilateral osteoarthritis
				+	+	-	-	Bl. Sugar (R) 106mg% Bl. Urea 25mg% S. Cholesterol 186 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 105 mg% Bl. Urea 23mg% S.Cholesterol 183 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD
				II	I	-	-				
				37cm	37cm	36.5cm	36cm				
				+	+	-	-				
				+	+	+	+				
				+	++	-	-				
60sec		52 sec				Response: GOOD					

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Madhaveiya	Age/Sex	65/M	O.P.No.	45760	From	26/07/08	To	8/9/08	No. of days Treated	44			
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU (BOTH)						
Complaints and duration		Pain and swelling in both knee joint since 1 year					Occupation	Farmer						
				Before treatment		After treatment		Investigation						
								Before treatment		After treatment				
				Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings	
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling				++	+++	-	+	TC : 9000 cell/cumm DC : P 58% L38% E 4% ESR		Joint space narrowing Subchondral sclerosis.	TC : 9300 cell/cumm DC : P 64% L.34% E2% ESR		Joint space narrowing Subchondral sclerosis.	
				II	I	-	II	½ hour 10 mm 1 hour 22 mm		Impression Bilateral osteoarthritis	½ hour 8mm 1 hour 17mm		Impression Bilateral osteoarthritis	
				38cm	38cm	37cm	37.5cm	Hb 78%		URINE : Albumin : NIL Sugar : NIL Deposit :1- 2 pus cells	Hb 79%		Bl. Sugar (R) 104 mg% Bl. Urea 26mg% S.Cholesterol 178 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD
				+	+	-	-	Bl. Sugar (R) 105mg%						
				+	+	+	+	Bl. Urea 24mg%						
				+	++	-	-	S. Cholesterol 176 mg%						
				8. Taking time to walk for 100 feet distance				65sec		60sec				
								Response: FAIR						

Name	Pitchan	Age/Sex	67/M	O.P.No.	46771	From	31/07/08	To	08/09/08	No. of days Treated	39
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 6 months				Occupation		Mechanic			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				++	++	-	-	TC : 9600 cell/cumm	Joint space narrowing	TC : 9700 cell/cumm	Joint space narrowing
2. Stiffness				+	+	-	-	DC : P 69% L28% E 3%	Marginal osteopytes	DC : P 66% L.30% E4%	Marginal osteopytes
3. Limitation of movement (30°-I, 60°-II, 60°<)				I	I	-	-	ESR	Impression :	ESR	Impression :
4. Measurement				41cm	41cm	40cm	40cm	½ hour 8 mm	Bilateral osteoarthritis	½ hour 6mm	Bilateral osteoarthritis
5. Tenderness				+	+	-	-	1 hour 16 mm		1 hour 12mm	
6. Crepitation on movements				+	+	+	+	Hb 80%	URINE :	Hb 81%	URINE :
7. Swelling				++	+	-	-	Bl. Sugar (R) 109mg%	Albumin : NIL	Bl. Sugar (R) 107 mg%	Albumin : NIL
8. Taking time to walk for 100 feet distance				68sec		58sec		Bl. Urea 27mg%	Sugar : NIL	Bl. Urea 25mg%	Sugar : NIL
								S. Cholesterol 196 mg%	Deposit : NAD	S.Cholesterol 192mg%	Deposit : NAD
								Response: GOOD			

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Karuppiya	Age/Sex	65/M	O.P.No.	46977	From	01/08/08	To	16/09/08	No. of days Treated	46	
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(LEFT)				
Complaints and duration		Pain and swelling in the left knee joint since 2 months				Occupation		Daily Labour				
			Before treatment		After treatment		Investigation					
			Right		Left		Before treatment		After treatment			
							Blood		Radiological findings	Blood		Radiological findings
1. Pain			-	++	-	-	TC : 8000 cell/cumm		Joint space narrowing	TC : 8400 cell/cumm		Joint space narrowing
2. Stiffness			-	+	-	-	DC : P 55% L40% E 5%		Subchondral sclerosis.	DC : P 58% L.37% E5%		Subchondral sclerosis.
3. Limitation of movement (30°-I, 60°-II, 60°<)			-	I	-	-	ESR		Impression : Left	ESR		Impression :
4. Measurement			36cm	37cm	36cm	36cm	½ hour 8 mm		knee joint	½ hour 6mm		Left knee joint
5. Tenderness			-	+	-	-	1 hour 15 mm		osteoarthritis	1 hour 12mm		osteoarthritis
6. Crepitation on movements			-	+	-	+	Hb 78%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Hb 80%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD
7. Swelling			-	++	-	-	Bl. Sugar (R) 112mg%			Bl. Sugar (R) 110 mg%		
							Bl. Urea 33mg%			Bl. Urea 31mg%		
							S. Cholesterol 198 mg%			S.Cholesterol 196 mg%		
8. Taking time to walk for 100 feet distance			62sec		54sec					Response: GOOD		

Name	Pitchamani	Age/Sex	56/F	O.P.No.	47178	From	02/08/08	To	16/09/08	No. of days Treated	45
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration	Pain and swelling in both knee joint since 7 months						Occupation	House wife			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling 8. Taking time to walk for 100 feet distance				+	++	-	+	TC : 8200 cell/cumm DC : P 60% L34% E 6% ESR ½ hour 6 mm 1 hour 13 mm Hb 72%	Marginal osteopytes Impression : Bilateral osteoarthritis	TC : 8400 cell/cumm DC : P 65% L.32% E3% ESR ½ hour 5mm 1 hour 10mm Hb 73%	Marginal osteopytes Impression : Bilateral osteoarthritis
				39cm	39cm	38cm	38.5cm				
				+	+	-	-		Bl. Sugar (R) 96mg%		URINE : Albumin : NIL Sugar : NIL Deposit : 2-3 pus cells
				+	+	+	+	Bl. Urea 31mg%	Bl. Urea 29mg%		
				+	++	-	-	S. Cholesterol 194 mg%	S.Cholesterol 191 mg%		
				66sec		61sec				Response: FAIR	

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Sababathi	Age/Sex	46/M	O.P.No.	47945	From	06/08/08	To	16/09/08	No. of days Treated	41
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 2 months					Occupation	Fruit seller			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling 8. Taking time to walk for 100 feet distance				++	++	-	-	TC : 8200 cell/cumm DC : P 58% L34% E 8% ESR ½ hour 6 mm 1 hour 12 mm Hb 83% Bl. Sugar (R) 101mg% Bl. Urea 27mg% S. Cholesterol 182 mg%	Joint space narrowing Soft tissue swelling Impression : Bilateral osteoarthritis	TC : 8400 cell/cumm DC : P 60% L.36% E4% ESR ½ hour 4mm 1 hour 8mm Hb 82% Bl. Sugar (R) 102 mg% Bl. Urea 28mg% S.Cholesterol 180 mg%	Joint space narrowing Reduced Soft tissue swelling Impression : Bilateral osteoarthritis
				+	+	-	-	URINE : Albumin : NIL Sugar : NIL Deposit : 2-3 pus cells	Bl. Sugar (R) 102 mg% Bl. Urea 28mg% S.Cholesterol 180 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
				I	II	-	-				
				39cm	39cm	38.5cm	38cm				
				+	+	-	-				
				+	+	+	+				
				+	+	-	-				
				66sec		56sec		Response: GOOD			

Name	Sanmugavel	Age/Sex	55/M	O.P.No.	47181	From	05/08/08	To	16/09/08	No. of days Treated	42
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(RIGHT)			
Complaints and duration		Pain and swelling in the right knee joint since 7 months				Occupation	Auto driver				
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings	
1. Pain			+++	-	+	-	TC : 9000 cell/cumm DC : P 55% L40% E 5% ESR ½ hour 7 mm 1 hour 14 mm Hb 85% Bl. Sugar (R) 98mg% Bl. Urea 32mg% S. Cholesterol 187 mg%	Joint space narrowing Subchondral sclerosis. Impression : Right knee joint osteoarthritis	TC : 8800 cell/cumm DC : P 58% L.38% E4% ESR ½ hour 5mm 1 hour 10mm Hb 86% Bl. Sugar (R) 100 mg% Bl. Urea 31mg% S.Cholesterol 183 mg%	Joint space narrowing Subchondral sclerosis. Impression : Right knee joint osteoarthritis	
2. Stiffness			+	-	-	-					
3. Limitation of movement (30°-I, 60°-II, 60°<)			I	-	II	-					
4. Measurement			40cm	39cm	39.5cm	39cm					
5. Tenderness			+	-	-	-	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Response: FAIR		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
6. Crepitation on movements			+	-	+	-					
7. Swelling			++	-	-	-					
8. Taking time to walk for 100 feet distance			62sec		58sec						

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT PATIENTS

Name	Velu	Age/Sex	62/M	O.P.No.	49438	From	13/08/08	To	24/09/08	No. of days Treated	42
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 1 year					Occupation	Farmer			
				Before treatment		After treatment		Investigation			
				Right		Left		Before treatment		After treatment	
								Blood		Radiological findings	
1. Pain				+	++	-	-	TC : 8800 cell/cumm	Joint space narrowing	TC : 9000 cell/cumm	Joint space narrowing
2. Stiffness				+	+	-	-	DC : P 63% L36% E 1%	Subchondral sclerosis.	DC : P 62% L.35% E3%	Subchondral sclerosis.
3. Limitation of movement (30°-I, 60°-II, 60°<)				II	I	-	-	ESR	Impression :	ESR	Impression :
4. Measurement				38cm	38.5cm	37cm	37.5cm	½ hour 7 mm	Bilateral osteoarthritis	½ hour 5mm	Bilateral osteoarthritis
5. Tenderness				+	+	-	-	1 hour 15 mm		1 hour 10mm	
6. Crepitation on movements				+	+	+	+	Hb 74%		Hb 73%	
7. Swelling				+	++	-	-	Bl. Sugar (R) 93mg%	URINE :	Bl. Sugar (R) 95 mg%	URINE :
8. Taking time to walk for 100 feet distance				56sec	44sec			Bl. Urea 28mg%	Albumin : NIL	Bl. Urea 26mg%	Albumin : NIL
								S. Cholesterol 184 mg%	Sugar : NIL	S.Cholesterol 183 mg%	Sugar : NIL
								Deposit : NAD	Response: GOOD		

Name	Maheswari	Age/Sex	47/F	O.P.No.	50157	From	18/08/08	To	26/09/08	No. of days Treated	39
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 1 months				Occupation		House wife			
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood		Radiological findings	Blood	
1. Pain			++	++	-	-	TC : 9200 cell/cumm	Joint space narrowing Soft tissue swelling Impression : Bilateral osteoarthritis	TC : 9100 cell/cumm		Joint space narrowing Reduced Soft tissue swelling Impression : Bilateral osteoarthritis
2. Stiffness			+	+	-	-	DC : P 62% L34% E 4%		DC : P 60% L.38% E2%		
3. Limitation of movement (30°-I, 60°-II, 60°<)			II	II	-	-	ESR		ESR		
4. Measurement			36.5cm	36.5cm	36cm	36cm	½ hour 8 mm		½ hour 6mm		
5. Tenderness			+	-	-	-	1 hour 15 mm		1 hour 14mm		
6. Crepitation on movements			+	-	+	+	Hb 71%	URINE : Albumin : NIL Sugar : NIL Deposit : 2-3 epithelial cells	Hb 72%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD
7. Swelling			+	-	-	-	Bl. Sugar (R) 98mg%		Bl. Sugar (R) 97 mg%		
							Bl. Urea 29mg%	Bl. Urea 26mg%			
							S. Cholesterol 194 mg%	S.Cholesterol 193 mg%			
8. Taking time to walk for 100 feet distance			48sec		40sec		Response: GOOD				

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

IN -PATIENTS

Name	Selliya	Age/Sex	65/M	I.P.No.	1482	From	11/06/08	To	29/06/08	No. of days Treated	19
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 6 months				Occupation		Daily Labour			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				++	++	-	-	TC : 7800 cell/cumm	Joint space narrowing	TC : 8000 cell/cumm	Joint space narrowing
2. Stiffness				+	+	-	-	DC : P55% L40% E5%	Subchondral sclerosis.	DC : P 52% L.43% E5%	Subchondral sclerosis.
3. Limitation of movement (30°-I, 60°-II, 60°<)				I	II	-	-	ESR	Impression :	ESR	Impression :
4. Measurement				37cm	37.5cm	36cm	36.5cm	1/2 hour 15 mm	Bilateral osteoarthritis	1/2 hour 10mm	Bilateral osteoarthritis
5. Tenderness				+	+	-	-	1 hour 30 mm		1 hour 20mm	
6. Crepitation on movements				+	+	+	+	Hb 70%		Hb 71%	
7. Swelling				+	++	-	-	Bl. Sugar (R) 82mg%	URINE :	Bl. Sugar (R) 84 mg%	URINE :
								Bl. Urea 30mg%	Albumin : NIL	Bl. Urea 27mg%	Albumin : NIL
								S. Cholesterol 176 mg%	Sugar : NIL	S.Cholesterol 178 mg%	Sugar : NIL
8. Taking time to walk for 100 feet distance				58sec		47sec			Deposit : 2-3 pus cells		Deposit : NAD
										Response: GOOD	

Name	Lakshmiammal	Age/Sex	65/F	I.P.No.	1982	From	29/07/08	To	23/08/08	No. of days Treated	26
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 1 year				Occupation		sweeper			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling 8. Taking time to walk for 100 feet distance				+++	++	-	-	TC : 8200 cell/cumm DC : P 61% L34% E 4% ESR ½ hour 7 mm 1 hour 15 mm Hb 72%	Marginal osteopytes Subchondral sclerosis. Impression Bilateral osteoarthritis	TC : 8400 cell/cumm DC : P 63% L.35% E2% ESR ½ hour 5mm 1 hour 10mm Hb 73%	Marginal osteopytes Subchondral sclerosis. Impression Bilateral osteoarthritis
				+	+	-	-	Bl. Sugar (R) 80mg% Bl. Urea 33mg% S. Cholesterol 216 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 81 mg% Bl. Urea 31mg% S.Cholesterol 214 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD
				I	II	-	-				
				39cm	38.5cm	38cm	38cm				
				+	-	-	-				
				+	+	+	+				
				++	+	-	-				
				65sec		56sec		Response: GOOD			

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

IN- PATIENTS

Name	Ganesan	Age/Sex	55/M	I.P.No.	2004	From	01/08/08	To	23/08/08	No. of days Treated	23	
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(RIGHT)				
Complaints and duration		Pain and swelling in the right knee joint since 2 months					Occupation	Farmer				
			Before treatment		After treatment		Investigation					
							Before treatment			After treatment		
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			+++	-	-	-	TC : 9800 cell/cumm DC : P 70% L24% E 6% ESR ½ hour 8 mm 1 hour 15 mm	Joint space narrowing Impression : Right knee joint osteoarthritis	TC : 9600 cell/cumm DC : P 66% L.30% E4% ESR ½ hour 6mm 1 hour 10mm	Joint spce narrowing Impression : Right knee joint osteoarthritis		
			37cm	36cm	36cm	36cm	Hb 76%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Hb 78%	Bl. Sugar (R) 87 mg% Bl. Urea 30mg% S.Cholesterol 181 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
			+	-	-	-	Bl. Sugar (R) 85mg%		Bl. Sugar (R) 87 mg%			
			+	-	+	-	Bl. Urea 36mg%	Sugar : NIL	Bl. Urea 30mg%			
			++	-	-	-	S. Cholesterol 179 mg%	Deposit : NAD	S.Cholesterol 181 mg%			
			8. Taking time to walk for 100 feet distance		66sec		52sec		Response: GOOD			

Name	Valliammal	Age/Sex	67/F	I.P.No.	2625	From	03/10/08	To	22/10/08	No. of days Treated	20
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU (BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 2 years				Occupation		House wife			
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood		Radiological findings	Blood	
1. Pain 2. Stiffness 3. Limitation of movement (30°-I, 60°-II, 60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			+++	++	+	-	TC : 9000 cell/cumm DC : P 60% L38% E 2% ESR ½ hour 5 mm 1 hour 10 mm Hb 70%	Marginal osteopytes Subchondral sclerosis. Impression Bilateral osteoarthritis	TC : 8900 cell/cumm DC : P 64% L.34% E2% ESR ½ hour 3mm 1 hour 6mm Hb 72%	Marginal osteopytes Subchondral sclerosis. Impression Bilateral osteoarthritis	
			+	+	-	-	Bl. Sugar (R) 97mg% Bl. Urea 26mg% S. Cholesterol 192 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : 2-3 epithelial cells	Bl. Sugar (R) 98 mg% Bl. Urea 23mg% S.Cholesterol 190 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
			I	II	II	-					
			38cm	37.5cm	37cm	36.5cm					
			+	-	-	-					
			+	+	+	+					
			+++	++	+	-					
8. Taking time to walk for 100 feet distance			70sec		66sec		Response: FAIR				

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

IN- PATIENTS

Name	Kovilpillai	Age/Sex	84/M	I.P.No.	2819	From	13/10/08	To	08/11/08	No. of days Treated	27		
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)					
Complaints and duration		Pain and swelling in both knee joint since 2 months					Occupation	Farmer					
				Before treatment		After treatment		Investigation					
				RightLeft		RightLeft		Before treatment		After treatment			
								Blood	Radiological findings	Blood	Radiological findings		
1. Pain				++	++	-	-	TC : 7600 cell/cumm		Marginal osteopytes Subchondral sclerosis. Impression Bilateral osteoarthritis	TC : 7500 cell/cumm		Marginal osteopytes Subchondral sclerosis. Impression Bilateral osteoarthritis
2. Stiffness				+	+	-	-	DC : P 54% L40% E 6%			DC : P 60% L.36% E4%		
3. Limitation of movement (30°-I, 60°-II, 60°<)				II	II	-	-	ESR		URINE : Albumin : NIL Sugar : NIL Deposit : 2-3 pus cells	ESR		URINE : Albumin : NIL Sugar : NIL Deposit : NAD
4. Measurement				41cm	41m	40cm	40cm	½ hour 7 mm			½ hour 5mm		
5. Tenderness				+	+	-	-	1 hour 15 mm		Bl. Sugar (R) 121mg% Bl. Urea 28mg% S. Cholesterol 176mg%	1 hour 10mm		Bl. Sugar (R) 125 mg% Bl. Urea 30mg% S.Cholesterol 178 mg%
6. Crepitation on movements				+	+	+	+	Hb 65%			Hb 66%		
7. Swelling				++	++	-	-	Bl. Sugar (R) 121mg%		Response: GOOD	Bl. Sugar (R) 125 mg%		
								Bl. Urea 28mg%			Bl. Urea 30mg%		
8. Taking time to walk for 100 feet distance				72sec		66sec		S. Cholesterol 176mg%					

Name	Lakshmi	Age/Sex	55/F	I.P.No.	2904	From	28/10/08	To	27/7/08	No. of days Treated	31
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(LEFT)			
Complaints and duration		Pain in the left knee joint since 6 months				Occupation	House wife				
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				-	++	-	-	TC : 8100 cell/cumm	Joint space narrowing	TC : 8200 cell/cumm	Joint space narrowing
2. Stiffness				-	+	-	-	DC : P 68% L30% E 2%	Subchondral sclerosis.	DC : P 662% L.33% E 1%	Subchondral sclerosis.
3. Limitation of movement (30°-I, 60°-II, 60°<)				-	I	-	-	ESR	Impression : Left knee joint osteoarthritis	ESR	Impression : Left knee joint osteoarthritis
4. Measurement				37cm	37m	37cm	37cm	½ hour 7 mm		½ hour 5mm	
5. Tenderness				-	-	-	-	1 hour 15 mm		1 hour 10mm	
6. Crepitation on movements				-	-	-	-	Hb 80%		Hb 81%	
7. Swelling				-	+	-	+	Bl. Sugar (R) 111mg%		Bl. Sugar (R) 109 mg%	
				-	-	-	-	Bl. Urea 36mg%	URINE :	Bl. Urea 32mg%	URINE :
								S. Cholesterol 180 mg%	Albumin : NIL	S.Cholesterol 182 mg%	Albumin : NIL
8. Taking time to walk for 100 feet distance				68sec		56sec		Sugar : NIL			Sugar : NIL
								Deposit : NAD		Response: GOOD	Deposit : NAD

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

IN - PATIENTS

Name	Senthil pandi	Age/Sex	60/M	LP.No.	2909	From	29/10/08	To	27/11/08	No. of days Treated	30	
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(BOTH)				
Complaints and duration		Pain and swelling in both knee joint since 1 year				Occupation		Daily labour				
			Before treatment		After treatment		Investigation					
			RightLeft		RightLeft		Before treatment			After treatment		
							Blood		Radiological findings	Blood		Radiological findings
1. Pain			++	+	-	-	TC : 7000 cell/cumm		Marginal osteopytes	TC : 7200 cell/cumm		Marginal osteopytes
2. Stiffness			+	+	-	-	DC : P 58% L38% E 4%		Joint space narrowing	DC : P 61% L.36% E3%		Joint space narrowing
3. Limitation of movement (30°-I, 60°-II, 60°<)			I	II	-	-	ESR		Impression :	ESR		Impression :
4. Measurement			38.5cm	38cm	38cm	38cm	½ hour 8 mm		Bilateral osteoarthritis	½ hour 6mm		Bilateral osteoarthritis
5. Tenderness			-	-	-	-	1 hour 15 mm			1 hour 12mm		
6. Crepitation on movements			+	+	+	+	Hb 72%			Hb 73%		
7. Swelling			+	+	-	-	Bl. Sugar (R) 118mg%		URINE :	Bl. Sugar (R) 115 mg%		URINE :
							Bl. Urea 32mg%		Albumin : NIL	Bl. Urea 30mg%		Albumin : NIL
8. Taking time to walk for 100 feet distance			58sec		44sec		S. Cholesterol 194 mg%		Sugar : NIL	S.Cholesterol 190 mg%		Sugar : NIL
									Deposit : 2-3 pus cells	Response: GOOD		Deposit : NAD

Name	Murugan	Age/Sex	53/M	I.P.No.	2925	From	1/11/08	To	22/11/08	No. of days Treated	22
Drug	Thandrikkai Chooranam 1 gram TDS with Luke warm water						Diagnosis	AZHAL KEEL VAYU(LEFT)			
Complaints and duration		Pain and swelling in the left knee joint since 1 year				Occupation	Servant				
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				-	++	-	-	TC : 8400 cell/cumm	Joint space narrowing	TC : 8900 cell/cumm	Joint space narrowing
2. Stiffness				-	+	-	-	DC : P 60% L36% E 4%	Subchondral sclerosis.	DC : P 64% L.32% E 4%	Subchondral sclerosis.
3. Limitation of movement (30°-I, 60°-II, 60°<)				-	I	-	-	ESR	Impression : Left knee joint osteoarthritis	ESR	Impression : Left knee joint osteoarthritis
4. Measurement				39 cm	41cm	39cm	39cm	½ hour 12 mm		½ hour 9mm	
5. Tenderness				-	+	-	-	1 hour 24 mm		1 hour 18mm	
6. Crepitation on movements				-	+	-	+	Hb 78%		Hb 80%	
7. Swelling				-	++	-	-	Bl. Sugar (R) 106mg%	URINE :	Bl. Sugar (R) 107 mg%	URINE :
								Bl. Urea 34 mg%	Albumin : NIL	Bl. Urea 31mg%	Albumin : NIL
8. Taking time to walk for 100 feet distance				62sec		54sec		S. Cholesterol 184 mg%	Sugar : NIL	S.Cholesterol 186 mg%	Sugar : NIL
									Deposit : NAD	Response: GOOD	Deposit : NAD

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Kazha Mythin	Age/Sex	60/M	O.P.No.	57825	From	29.09.08	To	10.11.08	No. of days Treated	43				
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)							
Complaints and duration		Pain and swelling in both knee joint since 2 years				Occupation		Farmer							
				Before treatment		After treatment		Investigation							
								Before treatment		After treatment					
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings				
1. Pain				++	++	-	-	TC : 9400 cell/cumm DC : P 62% L35% E 3% ESR ½ hour 8 mm 1 hour 16 mm Hb 72% Bl. Sugar (R) 106mg% Bl. Urea 28mg% S. Cholesterol 186 mg%	1) Joint space narrowing 2) Marginal Osteopytes Impression : Bilateral Osteo arthritis	TC : 9500 cell/cumm DC : P 60% L.38% E2% ESR ½ hour 6mm 1 hour 12mm Hb 73% Bl. Sugar (R) 108 mg% Bl. Urea 25mg% S.Cholesterol 181 mg%	1) Joint space narrowing 2) Marginal Osteopytes Impression : Bilateral Osteo arthritis				
2. Stiffness				+	+	-	-								
3. Limitation of movement (30°-I,60°-II,60°<)				II	II	-	-		URINE : Albumin : NIL Sugar : NIL Deposit : NAD		URINE : Albumin : NIL Sugar : NIL Deposit : NAD				
4. Measurement				39.5c	39cm	39cm	39cm								
5. Tenderness				m	-	-	-								
6. Crepitation on movements				-	+	+	+	Response: GOOD							
7. Swelling				+	+	-	-								
8. Taking time to walk for 100 feet distance				64sec		54sec									

Name	Murugan	Age/Sex	58/M	O.P.No.	58626	From	02.10.08	To	10.11.08	No. of days Treated	40		
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)					
Complaints and duration		Pain and swelling in both knee joint since 1 year				Occupation		Daily Labour					
				Before treatment		After treatment		Investigation					
								Before treatment		After treatment			
				Right	Left	Righ t	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling				++	++	-	-	TC : 9100 cell/cumm DC : P 58% L38% E 4% ESR ½ hour 12 mm 1 hour 24 mm Hb 80% Bl. Sugar (R) 88mg% Bl. Urea 32mg% S. Cholesterol 188 mg%	1) Marginal Osteopytes 2) Subchondral Sclerosis Impression : Bilateral Osteo arthritis	TC : 9300 cell/cumm DC : P 56% L.42% E2% ESR ½ hour 9mm 1 hour 18mm Hb 73% Bl. Sugar (R) 90 mg% Bl. Urea 33mg% S.Cholesterol 187 mg%	1) Marginal Osteopytes 2) Subchondral sclerosis Impression : Bilateral Osteo arthritis		
				+	+	-	-						
				I	II	-	-						
				36.5cm	36.5	36cm	36cm						
				-	-	-	-						
				+	+	+	+						
				+	+	-	-						
8. Taking time to walk for 100 feet distance				58sec		48sec		URINE : Albumin : NIL Sugar : NIL Deposit : NAD		Response: GOOD			

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Arumugam	Age/Sex	60/M	O.P.No.	58790	From	03.10.08	To	10.11.08	No. of days Treated	39	
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)				
Complaints and duration		Pain and swelling in both knee joint since 1 year				Occupation		Baker				
			Before treatment		After treatment		Investigation					
							Before treatment			After treatment		
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling 8. Taking time to walk for 100 feet distance			++	++	+	-	TC : 7600 cell/cumm DC: P 60% L35% E5% ESR ½ hour 10mm 1 hour 25 mm Hb 78%		1) Subchondral sclerosis Impression : Bilateral Osteo arthritis	TC : 7800 cell/cumm DC : P 69% L.32% E4% ESR ½ hour 7mm 1 hour 14mm Hb 76%		1) Subchondral sclerosis Impression : Bilateral Osteo arthritis
			37.5cm	37cm	37cm	37cm	Bl. Sugar (R) 87mg% Bl. Urea 27mg% S. Cholesterol 198 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 90 mg% Bl. Urea 25mg% S.Cholesterol 196 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD
			-	-	-	-						
			+	+	+	+						
			++	+	+	-						
			65sec		59sec							
										Response: FAIR		

Name	Janarthanam	Age/Sex	64/M	O.P.No.	58853	From	03.10.08	To	10.11.08	No. of days Treated	39
Drug	Linga Chendooram 65 mill gram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (RIGHT)			
Complaints and duration		Pain and swelling in the right knee joint since 1 year				Occupation		Farmer			
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Righ t	Left	Blood		Radiological findings	Blood	
1. Pain			++	-	-	-	TC : 7200 cell/cumm	1) Joint space	TC : 7400 cell/cumm	1) Joint space	
2. Stiffness			+	-	-	-	DC : P 60% L36% E 4%	Narrowing	DC : P 63% L.34% E3%	narrowing	
3. Limitation of movement (30°-I,60°-II,60°<)			II	-	-	-	ESR	2) Marginal	ESR	2) Marginal	
4. Measurement			38.5cm	38cm	38cm	38cm	½ hour 6 mm	Osteopytes	½ hour 4mm	Osteopytes	
5. Tenderness			-	-	-	-	1 hour 12 mm	Impression :	1 hour 8mm	Impression :	
6. Crepitation on movements			+	+	+	+	Hb 72%	Right knee joint	Hb 74%	Right knee joint	
7. Swelling			+	-	-	-	Bl. Sugar (R) 97mg%	Osteoarthritis	Bl. Sugar (R) 99 mg%	Osteoarthritis	
							Bl. Urea 36mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Urea 35mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
						S. Cholesterol 202 mg%	Response: GOOD				
8. Taking time to walk for 100 feet distance			58sec		49sec						

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Saraswathi	Age/Sex	45/F	O.P.No.	59334	From	06.10.08	To	17.11.08	No. of days Treated	43	
Drug	Linga Chendooram 65 milligram B.D.with Butter					Diagnosis	AZHAL KEEL VAYU (RIGHT)					
Complaints and duration	Pain in the right knee joint since 5 months					Occupation	Fruit seller					
			Before treatment		After treatment		Investigation					
							Before treatment			After treatment		
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			++	-	-	-	TC : 9000 cell/cumm DC : P 70% L27% E 3% ESR ½ hour 7 mm 1 hour 15 mm Hb 64%		1) Joint space narrowing Impression : Right knee joint osteoarthritis	TC : 9100 cell/cumm DC : P 66% L.32% E2% ESR ½ hour 5mm 1 hour 10mm Hb 65%		1) Joint space narrowing Impression : Right knee joint Osteoarthritis
			39cm	39cm	39cm	39cm	Bl. Sugar (R) 102mg% Bl. Urea 26mg% S. Cholesterol 211 mg%			Bl. Sugar (R) 104 mg% Bl. Urea 27mg% S.Cholesterol 209 mg%		
			-	-	-	-	URINE : Albumin : NIL Sugar : NIL Deposit : 1-2 Pus cells		Response: GOOD			
			+	+	+	+						
			-	-	-	-						
			50sec		40sec							
			8. Taking time to walk for 100 feet distance									

Name	Anthoniamma	Age/Sex	50/F	O.P.No.	59336	From	06.10.08	To	17.11.08	No. of days Treated	43
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 1 year				Occupation		House wife			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Righ t	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling				++	++	-	-	TC : 9000 cell/cumm DC : P 69% L25% E 6% ESR ½ hour 8 mm 1 hour 17 mm Hb 68%	1) Subchondral Sclerosis 2) Soft tissue swelling Impression : Bilateral Osteo arthritis	TC : 9200 cell/cumm DC : P 65% L.30% E5% ESR ½ hour 5mm 1 hour 10mm Hb 69%	1) Subchondral sclerosis 2) Reduced soft tissue swelling Impression : Bilateral Osteo arthritis
				+	+	-	-	Bl. Sugar (R) 80mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 82 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD
				II	II	-	-	Bl. Urea 31mg%		Bl. Urea 29mg%	
				35cm	35.5	35cm	35cm	S. Cholesterol 186 mg%		S.Cholesterol 189 mg%	
				-	-	-	-			Response: GOOD	
				+	+	+	+				
				+	+	-	-				
8. Taking time to walk for 100 feet distance				56sec		46sec					

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Raju	Age/Sex	42/M	O.P.No.	59500	From	07.10.08	To	17.11.08	No. of days Treated	42			
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (LEFT)						
Complaints and duration		Pain in the left knee joint since 1 year					Occupation	Servant						
			Before treatment		After treatment		Investigation							
							Before treatment		After treatment					
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings		
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			-	++	-	-	TC : 8600 cell/cumm DC: P 58% L38% E4% ESR ½ hour 9mm 1 hour 19 mm Hb 80%		Impression : Normal study	TC : 8700 cell/cumm DC : P 62% L.36% E2% ESR ½ hour 7mm 1 hour 15mm Hb 81%		Impression : Normal study		
			35cm	35cm	35cm	35cm	Bl. Sugar (R) 82mg% Bl. Urea 26mg% S. Cholesterol 198 mg%			Bl. Sugar (R) 85 mg% Bl. Urea 23mg% S.Cholesterol 196 mg%				
			-	-	-	-	URINE : Albumin : NIL Sugar : NIL Deposit : NAD		Response: GOOD		URINE : Albumin : NIL Sugar : NIL Deposit : NAD			
			+	+	-	+								
			-	-	-	-								
			8. Taking time to walk for 100 feet distance			45sec		40sec						

Name	Avudaiammal	Age/Sex	45/F	O.P.No.	59664	From	08.10.08	To	19.11.08	No. of days Treated	42				
Drug	Linga Chendooram 65 mill gram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (RIGHT)							
Complaints and duration		Pain and swelling in the right knee joint since 1 year				Occupation		Former							
				Before treatment		After treatment		Investigation							
								Before treatment		After treatment					
				Right	Left	Righ t	Left	Blood		Radiological findings	Blood		Radiological findings		
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling				++	-	-	-	TC : 9800 cell/cumm DC : P 58% L37% E 5% ESR ½ hour 7 mm 1 hour 14 mm Hb 72%		1) Joint space Narrowing Impression : Right knee joint Osteoarthritis	TC : 9600 cell/cumm DC : P 63% L.34% E3% ESR ½ hour 5mm 1 hour 11mm Hb 73%		1) Joint space narrowing Impression : Right knee joint Osteoarthritis		
				37.5cm	37cm	37cm	37cm	Bl. Sugar (R) 96mg% Bl. Urea 29mg% S. Cholesterol 178 mg%			URINE : Albumin : NIL Sugar : NIL Deposit : NAD				
				+	-	-	-								
				+	-	+	-								
				++	-	-	-								
				8. Taking time to walk for 100 feet distance		60sec		50sec							
												Response: GOOD			

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Sedhu	Age/Sex	60/M	O.P.No.	59887	From	10.10.08	To	24.11.08	No. of days Treated	46
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)			
Complaints and duration	Pain and swelling in both knee joint since 1 year						Occupation	Auto Driver			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				++	++	-	-	TC : 10000 cell/cumm	1) Subchondral sclerosis	TC : 9800 cell/cumm	1) Subchondral sclerosis
2. Stiffness				+	+	-	-	DC : P 68% L30% E 2%	2) Marginal Osteopytes	DC : P 63% L.34% E3%	2) Marginal Osteopytes
3. Limitation of movement (30°-I,60°-II,60°<)				I	II	-	-	ESR	Impression : Bilateral Osteo arthritis	½ hour 4mm	Impression : Bilateral Osteo arthritis
4. Measurement				38.5c	38cm	38cm	38cm	1 hour 10 mm		1 hour 8mm	
5. Tenderness				+	+	-	-	Hb 78%		Hb 73%	
6. Crepitation on movements				+	+	+	+	Bl. Sugar (R) 86mg%	URINE :	Bl. Sugar (R) 108 mg%	URINE :
7. Swelling				++	+	-	-	Bl. Urea 33mg%	Albumin : NIL	Bl. Urea 25mg%	Albumin : NIL
								S. Cholesterol 206 mg%	Sugar : NIL	S.Cholesterol 181 mg%	Sugar : NIL
									Deposit : NAD		Deposit : NAD
8. Taking time to walk for 100 feet distance				56sec		45sec				Response: GOOD	

Name	Jaganathan	Age/Sex	72/M	O.P.No.	59948	From	10.10.08	To	24.11.08	No. of days Treated	46
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (RIGHT)			
Complaints and duration	Pain and swelling in the right knee joint since 2 years						Occupation	Daily Labour			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				+++	-	+	-	TC : 8700cell/cumm	1) Reduced joint space	TC : 8900 cell/cumm	1) Reduced joint space
2. Stiffness				+	-	-	-	DC : P 62% L32% E 6%	2) Osteopyte changes	DC : P 63% L.35% E2%	2) Osteopyte changes
3. Limitation of movement (30°-I,60°-II,60°<)				I	-	II	-	ESR	Impression : Right knee joint Osteoarthritis	½ hour 11mm	Impression : Right knee joint Osteoarthritis
4. Measurement				38.5cm	37cm	38cm	37cm	1 hour 14 mm		1 hour 20mm	
5. Tenderness				+	-	-	-	Hb 72%		Hb 74%	
6. Crepitation on movements				+	-	+	-	Bl. Sugar (R) 265mg%		Bl. Sugar (R) 253 mg%	
7. Swelling				++	-	+	-	Bl. Urea 30mg%	URINE :	Bl. Urea 27mg%	URINE :
								S. Cholesterol 174 mg%	Albumin : NIL	S.Cholesterol 171 mg%	Albumin : NIL
8. Taking time to walk for 100 feet distance				62sec		52sec			Sugar : NIL	Response: FAIR	Sugar : NIL
									Deposit : NAD		Deposit : NAD

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Lakshmi	Age/Sex	65/F	O.P.No.	59959	From	10.10.08	To	24.11.08	No. of days Treated	46
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 4 years					Occupation	House Wife			
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Right	Left	Blood		Radiological findings	Blood	
1. Pain			++	+	++	+	TC : 9400 cell/cumm	1) Reduced joint space	TC : 9200 cell/cumm	1) Reduced Joint space	
2. Stiffness			+	+	+	+	DC: P 48% L48% E4%	2) Subchondral sclerosis	DC : P 50% L.48% E2%	2) Subchondral sclerosis	
3. Limitation of movement (30°-I,60°-II,60°<)			I	II	I	II	ESR	Impression : Bilateral Osteo arthritis	ESR	Impression : Bilateral Osteo arthritis	
4. Measurement			38.5cm	38cm	38.5c	38cm	½ hour 6mm	1 hour 12 mm	½ hour 5mm	1 hour 11mm	
5. Tenderness			+	-	+	-	Hb 79%	Hb 80%			
6. Crepitation on movements			+	+	+	+	Bl. Sugar (R) 242mg%	URINE :	Bl. Sugar (R) 235 mg%	URINE :	
7. Swelling			++	+	++	+	Bl. Urea 28mg%	Albumin : NIL	Bl. Urea 25mg%	Albumin : NIL	
8. Taking time to walk for 100 feet distance			66sec		63sec		S. Cholesterol 196 mg%	Sugar : ++	S.Cholesterol 194 mg%	Sugar : ++	
								Deposit : NAD	Response: POOR	Deposit : NAD	

Name	Murugan	Age/Sex	57/M	O.P.No.	59943	From	10.10.08	To	19.11.08	No. of days Treated	41
Drug	Linga Chendooram 65 mill gram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (RIGHT)			
Complaints and duration		Pain and swelling in the right knee joint since 1 year				Occupation		Mechanic			
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Righ t	Left	Blood		Radiological findings	Blood	
1. Pain			++	++	-	-	TC : 9800 cell/cumm DC : P 55% L40% E 5% ESR ½ hour 7 mm 1 hour 15 mm Hb 82% Bl. Sugar (R) 106mg% Bl. Urea 33mg% S. Cholesterol 204 mg%	1) Osteophytic changes 2) Soft tissue swelling Impression : Bilateral Osteoarthritis	TC : 9700 cell/cumm DC : P 59% L.36% E5% ESR ½ hour 5mm 1 hour 10mm Hb 83%		1) Osteophytic changes 2) Soft tissue swelling Impression : Bilateral Osteoarthritis
2. Stiffness			+	+	-	-			Bl. Sugar (R) 101 mg% Bl. Urea 31mg% S.Cholesterol 207 mg%		
3. Limitation of movement (30°-I,60°-II,60°<)			I	II	-	-		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	URINE : Albumin : NIL Sugar : NIL Deposit : NAD		
4. Measurement			40.5cm	40cm	40cm	38cm			Response: GOOD		
5. Tenderness			+	+	-	-					
6. Crepitation on movements			+	+	+	+					
7. Swelling			++	+	-	-					
8. Taking time to walk for 100 feet distance			58sec		48sec						

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Ammiyakka	Age/Sex	50/F	O.P.No.	59906	From	10.10.08	To	18.11.08	No. of days Treated	40	
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)				
Complaints and duration		Pain & swelling in both knee joints since 8 months				Occupation		Daily Labour				
			Before treatment		After treatment		Investigation					
							Before treatment			After treatment		
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			++	++	-	-	TC : 9600 cell/cumm DC : P 70% L29% E 1% ESR ½ hour 12 mm 1 hour 25 mm Hb 71%		1) Reduced Joint space Impression : Bilateral osteoarthritis	TC : 9700 cell/cumm DC : P 66% L.32% E2% ESR ½ hour 9mm 1 hour 18mm Hb 73%		1) Reduced joint space Impression : Bilateral osteoarthritis
			+	+	-	-	Bl. Sugar (R) 235mg% Bl. Urea 24mg% S. Cholesterol 198 mg%			Albumin : NIL Sugar : NIL S.Cholesterol 197 mg%		
			II	II	-	-			URINE :		URINE :	
			38cm	38.5cm	38cm	38cm			Albumin : NIL		Bl. Sugar (R) 220 mg%	
			-	+	-	-			Sugar : NIL		Bl. Urea 26mg%	
			+	+	+	+			Deposit : 1-2 Pus cells		S.Cholesterol 197 mg%	
			+	++	-	-					Response: GOOD	
8. Taking time to walk for 100 feet distance			54sec		46sec							

Name	Ananda Selvakumar	Age/Sex	52/M	O.P.No.	60052	From	11.10.08	To	25.11.08	No. of days Treated	46				
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (RIGHT)							
Complaints and duration		Pain and swelling in the right knee joint since 1 year				Occupation		Butler							
				Before treatment		After treatment		Investigation							
								Before treatment		After treatment					
				Right	Left	Righ t	Left	Blood	Radiological findings	Blood	Radiological findings				
1. Pain				++	-	+	-	TC : 7600 cell/cumm DC : P 64% L34% E 2% ESR ½ hour 5 mm 1 hour 10 mm Hb 78%	1) Joint space narrowing Impression : Right knee joint Osteoarthritis	TC : 7800 cell/cumm DC : P 66% L.32% E2% ESR ½ hour 4mm 1 hour 8mm Hb 79% Bl. Sugar (R) 118 mg% Bl. Urea 27mg% S.Cholesterol 211 mg%	1) Joint space narrowing Impression : Right knee joint Osteoarthritis				
2. Stiffness				+	-	-	-								
3. Limitation of movement (30°-I,60°-II,60°<)				I	-	II	-		URINE : Albumin : NIL Sugar : NIL Deposit : NAD		URINE : Albumin : NIL Sugar : NIL Deposit : NAD				
4. Measurement				36.5cm	35cm	35.5c	35cm								
5. Tenderness				+	-	+	-								
6. Crepitation on movements				+	-	+	-								
7. Swelling				++	-	+	-								
8. Taking time to walk for 100 feet distance				58sec		52sec		Response: FAIR							

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Mani	Age/Sex	46/M	O.P.No.	61056	From	17.10.08	To	26.11.08	No. of days Treated	41	
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)				
Complaints and duration		Pain in both knee joints since 8 months					Occupation	Servant				
			Before treatment		After treatment		Investigation					
							Before treatment			After treatment		
			Right	Left	Righ t	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			++	++	-	-	TC : 9100 cell/cumm DC: P 60% L34% E6% ESR ½ hour 9mm 1 hour 18 mm Hb 72% Bl. Sugar (R) 78mg% Bl. Urea 29mg% S. Cholesterol 204 mg%	Impression : Normal study	TC : 9200 cell/cumm DC : P 64% L.32% E4% ESR ½ hour 7mm 1 hour 15mm Hb 74% Bl. Sugar (R) 82 mg% Bl. Urea 30mg% S.Cholesterol 206 mg%	Impression : Normal study		
			+	+	-	-						
			II	II	-	-		URINE : Albumin : NIL Sugar : NIL Deposit : NAD		Bl. Sugar (R) 82 mg% Bl. Urea 30mg% S.Cholesterol 206 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
			36cm	36cm	36cm	36cm						
			-	-	-	-						
			+	+	+	+	S. Cholesterol 204 mg%		Bl. Sugar (R) 82 mg% Bl. Urea 30mg% S.Cholesterol 206 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD		
			-	-	-	-						
8. Taking time to walk for 100 feet distance			48sec		40sec		Response: GOOD					

Name	Sornam	Age/Sex	58/F	O.P.No.	61356	From	20.10.08	To	02.12.08	No. of days Treated	34
Drug	Linga Chendooram 65 mill gram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (LEFT)			
Complaints and duration		Pain and swelling in the left knee joint since 8 months				Occupation		House Wife			
				Before treatment		After treatment		Investigation			
				RightLeft		RightLeft		Before treatment		After treatment	
								Blood	Radiological findings	Blood	Radiological findings
1. Pain				-	++	-	-	TC : 9900 cell/cumm DC : P 60% L34% E 6% ESR ½ hour 15mm 1 hour 30 mm Hb 72% Bl. Sugar (R) 233mg% Bl. Urea 36mg% S. Cholesterol 198 mg%	1) Osteopytic changes 2) Subchondral sclerosis Impression : Left knee joint Osteoarthritis	TC : 10000 cell/cumm DC : P 64% L.32% E4% ESR ½ hour 11mm 1 hour 20mm Hb 74% Bl. Sugar (R) 218 mg% Bl. Urea 32mg% S.Cholesterol 197 mg%	1) Osteopytic changes 2) Subchondral sclerosis Impression : Left knee joint Osteoarthritis
2. Stiffness				-	+	-	-				
3. Limitation of movement (30°-I,60°-II,60°<)				-	II	-	-				
4. Measurement				37cm	37.5c	37cm	37cm				
5. Tenderness				-	+	-	-				
6. Crepitation on movements				-	+	-	+				
7. Swelling				-	++	-	-				
8. Taking time to walk for 100 feet distance				66sec		52sec		URINE : Albumin : NIL Sugar : NIL Deposit : NAD		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
								Response: GOOD			

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Velu	Age/Sex	58/M	O.P.No.	61506	From	20.10.08	To	29.11.08	No. of days Treated	41			
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)						
Complaints and duration	Pain & swelling in both knee joints since 1 year						Occupation	Former						
				Before treatment		After treatment		Investigation						
								Before treatment		After treatment				
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings			
1. Pain				++	+++	-	+	TC : 7800 cell/cumm DC: P 62% L35% E5% ESR ½ hour 6mm 1 hour 12 mm Hb 78% Bl. Sugar (R) 128mg% Bl. Urea 29mg% S. Cholesterol 194 mg%	1) Reduced joint space 2) Subchondral sclerosis Impression : Bilateral Osteoarthritis	TC : 7600 cell/cumm DC : P 64% L.34% E2% ESR ½ hour 4mm 1 hour 8mm Hb 80% Bl. Sugar (R) 125mg% Bl. Urea 30mg% S.Cholesterol 198 mg%	1) Reduced joint space 2) Subchondral sclerosis Impression : Bilateral Osteoarthritis			
2. Stiffness				+	+	-	+							
3. Limitation of movement (30°-I,60°-II,60°<)				II	I	-	II							
4. Measurement				37.5cm	38cm	37cm	37.5cm							
5. Tenderness				+	+	-	+-							
6. Crepitation on movements				+	+	+	+							
7. Swelling				+	++	-	+-							
8. Taking time to walk for 100 feet distance				60sec		55sec		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Response: FAIR	URINE : Albumin : NIL Sugar : NIL Deposit : NAD				
Name	Suppuraman	Age/Sex	68/M	O.P.No.	61628	From	21.10.08				To	29.11.08	No. of days Treated	40
Drug	Linga Chendooram 65 mill gram B.D.with Butter						Diagnosis				AZHAL KEEL VAYU (RIGHT)			
Complaints and duration	Pain and swelling in the right knee joint since 7 months						Occupation	Daily labour						
				Before treatment		After treatment		Investigation						
								Before treatment		After treatment				
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings			
1. Pain				+++	-	-	-	TC : 8800 cell/cumm DC : P 65% L30% E 5% ESR ½ hour 6mm 1 hour 12 mm Hb 70% Bl. Sugar (R) 86mg% Bl. Urea 27mg% S. Cholesterol 182 mg%	1) Joint space narrowing 2) Marginal osteopytes Impression : Right knee joint Osteoarthritis	TC : 9000 cell/cumm DC : P 64% L.34% E2% ESR ½ hour 4mm 1 hour 8mm Hb 71% Bl. Sugar (R) 88 mg% Bl. Urea 25mg% S.Cholesterol 185 mg%	1) Joint space narrowing 2) Marginal osteopytes Impression : Right knee joint Osteoarthritis			
2. Stiffness				+	-	-	-							
3. Limitation of movement (30°-I,60°-II,60°<)				I	-	-	-							
4. Measurement				39cm	38cm	38cm	38cm							
5. Tenderness				+	-	-	-							
6. Crepitation on movements				+	-	+	-							
7. Swelling				++	-	-	-							
8. Taking time to walk for 100 feet distance				62sec		52sec		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Response: GOOD	URINE : Albumin : NIL Sugar : NIL Deposit : NAD				

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Iiya dhurai	Age/Sex	65/M	O.P.No.	62090	From	23.10.08	To	03.12.08	No. of days Treated	42	
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)				
Complaints and duration		Pain and swelling in both knee joint since 2 years				Occupation		Farmer				
			Before treatment		After treatment		Investigation					
							Before treatment			After treatment		
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling 8. Taking time to walk for 100 feet distance			+++	++	+	-	TC : 9000 cell/cumm DC : P 60% L34% E6%		1) Joint space narrowing	TC : 9200 cell/cumm DC : P 64% L.34% E2%		1) Joint space narrowing
			+	+	-	-	ESR		2) Subchondral	ESR		2) Subchondral
			I	II	II	-	½ hour 10 mm		Sclerosis	½ hour 8mm		Sclerosis
			37 cm	35.5cm	35.5cm	35 cm	1 hour 20 mm		Impression :	1 hour 16mm		Impression :
			+	+	-	-	Hb 80%		Bilateral Osteo	Hb 81%		Bilateral Osteo
			+	+	+	+	Bl. Sugar (R) 106mg%		arthritis	Bl. Sugar (R) 104 mg%		arthritis
			++	+	-	-	Bl. Urea 32mg%		URINE :	Bl. Urea 30mg%		URINE :
							S. Cholesterol 188 mg%			S.Cholesterol 190 mg%		
			64sec		59sec		Albumin : NIL Sugar : NIL Deposit : NAD		Response: FAIR		Albumin : NIL Sugar : NIL Deposit : NAD	

Name	Sankaran	Age/Sex	62/M	O.P.No.	62864	From	30.10.08	To	06.12.08	No. of days Treated	38		
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)					
Complaints and duration		Pain and swelling in both knee joint since 8 months				Occupation		Auto Driver					
			Before treatment		After treatment		Investigation						
							Before treatment			After treatment			
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings	
1. Pain			+++	++	-	-	TC : 7600 cell/cumm DC : P 58% L38% E 4% ESR ½ hour 6 mm 1 hour 12 mm Hb 68% Bl. Sugar (R) 96mg% Bl. Urea 24mg% S. Cholesterol 190 mg%	1) Marginal Osteopytes 2) Subchondral Sclerosis Impression : Bilateral Osteo arthritis	TC : 7800 cell/cumm DC : P 64% L.34% E2% ESR ½ hour 4mm 1 hour 8mm Hb 70% Bl. Sugar (R) 98 mg% Bl. Urea 25mg% S.Cholesterol 194 mg%		1) Marginal Osteopytes 2) Subchondral sclerosis Impression : Bilateral Osteo arthritis		
2. Stiffness			+	+	-	-							
3. Limitation of movement (30°-I,60°-II,60°<)			I	II	-	-		URINE : Albumin : NIL Sugar : NIL Deposit : 1-2 puscells		Bl. Urea 25mg% S.Cholesterol 194 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
4. Measurement			39 cm	38.5c	38cm	38cm							
5. Tenderness			+	+	-	-							
6. Crepitation on movements			+	+	+	+							
7. Swelling			++	+	-	-							
8. Taking time to walk for 100 feet distance			68sec		58sec								

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Masilamani	Age/Sex	65/M	O.P.No.	63121	From	31.10.08	To	03.12.08	No. of days Treated	34
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)			
Complaints and duration	Pain and swelling in both knee joint since 1 year						Occupation	Farmer			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				++	++	-	-	TC : 8800 cell/cumm	1) Joint space narrowing	TC : 8600 cell/cumm	1) Joint space narrowing
2. Stiffness				+	+	-	-	DC : P 55% L40% E 5%	2) Marginal Osteopytes	DC : P 60% L.34% E6%	2) Marginal Osteopytes
3. Limitation of movement (30°-I,60°-II,60°<)				II	II	-	-	ESR ½ hour 7 mm	Impression : Bilateral Osteo arthritis	½ hour 4mm	Impression : Bilateral Osteo arthritis
4. Measurement				37.5c	37.5cm	37cm	37cm	1 hour 14 mm	URINE :	1 hour 8mm	URINE :
5. Tenderness				m	+	-	-	Hb 85%	Albumin : NIL	Hb 87%	Albumin : NIL
6. Crepitation on movements				+	+	+	+	Bl. Sugar (R) 185mg%	Sugar : NIL	Bl. Sugar (R) 180 mg%	Sugar : NIL
7. Swelling				+	+	-	-	Bl. Urea 28mg%	Deposit : NAD	Bl. Urea 25mg%	Deposit : NAD
8. Taking time to walk for 100 feet distance				+	+	-	-	S. Cholesterol 210 mg%		S.Cholesterol 212 mg%	
				62sec		52sec				Response: GOOD	

Name	Muthulakshmi	Age/Sex	48/F	O.P.No.	63360	From	01.11.08	To	04.12.08	No. of days Treated	34
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (LEFT)			
Complaints and duration	Pain and swelling in the left knee joint since 1 year						Occupation	Fruit seller			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				-	+++	-	+	TC : 9200 cell/cumm	1) Subchondral Sclerosis	TC : 9400 cell/cumm	1) Subchondral Sclerosis
2. Stiffness				-	+	-	+	DC : P 68% L30% E 2%	2) Soft tissue swelling	DC : P 64% L.34% E2%	2) Reduced Soft tissue swelling
3. Limitation of movement (30°-I,60°-II,60°<)				-	I	-	II	ESR ½ hour 15 mm	Impression : Left knee joint Osteo arthritis	½ hour 11mm	Impression : Left knee joint Osteo arthritis
4. Measurement				36 cm	37cm	36cm	36.5c	1 hour 30 mm	URINE :	1 hour 20mm	URINE :
5. Tenderness				-	+	-	m	Hb 70%	Albumin : NIL	Hb 71%	Albumin : NIL
6. Crepitation on movements				-	+	-	+	Bl. Sugar (R) 94mg%	Sugar : NIL	Bl. Sugar (R) 96 mg%	Sugar : NIL
7. Swelling				-	++	-	+	Bl. Urea 26mg%	Deposit : NAD	Bl. Urea 28mg%	Deposit : NAD
8. Taking time to walk for 100 feet distance				-	+	-	+	S. Cholesterol 194 mg%		S.Cholesterol 198 mg%	
				60sec		54sec				Response: FAIR	

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Aniba	Age/Sex	60/M	O.P.No.	63559	From	03.11.08	To	04.12.08	No. of days Treated	32				
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU							
Complaints and duration		Pain and swelling in the left knee joint since 6 months				Occupation		Tailor							
				Before treatment		After treatment		Investigation							
								Before treatment		After treatment					
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings				
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling				-	+++	-	-	TC : 8400 cell/cumm DC : P 70% L26% E 4% ESR ½ hour 12 mm	1) Joint space narrowing 2) Marginal Osteopytes	TC : 8600 cell/cumm DC : P 68% L.26% E2% ESR ½ hour 9mm	1) Joint space narrowing 2) Marginal Osteopytes				
				39cm	40cm	39cm	39cm	1 hour 25 mm Hb 80%	Impression : Left knee joint Osteo arthritis	1 hour 18mm Hb 81%	Impression : Left knee joint Osteo arthritis				
				-	+	-	-	Bl. Sugar (R) 108mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 106 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD				
				-	+	-	+	Bl. Urea 34mg%		Bl. Urea 30mg%					
				-	++	-	-	S. Cholesterol 212 mg%		S.Cholesterol 210 mg%					
				8. Taking time to walk for 100 feet distance				66sec		55sec					
												Response: GOOD			

Name	Nisha	Age/Sex	45/F	O.P.No.	63649	From	03.11.08	To	05.12.08	No. of days Treated	33
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)			
Complaints and duration	Pain in both knee joint since 7 months						Occupation	House wife			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling 8. Taking time to walk for 100 feet distance				++	++	-	-	TC : 9600 cell/cumm DC : P 48% L48% E 4% ESR ½ hour 14 mm 1 hour 28 mm Hb 74%	1) Joint space narrowing Impression : Bilateral Osteo arthritis	TC : 9500 cell/cumm DC : P 56% L.39% E5% ESR ½ hour 10mm 1 hour 20mm Hb 76%	1) Joint space narrowing Impression : Bilateral Osteo arthritis
				+	+	-	-	Bl. Sugar (R) 120mg% Bl. Urea 30mg% S. Cholesterol 202 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 118 mg% Bl. Urea 29mg% S.Cholesterol 206 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD
				II	II	-	-				
				36 cm	36cm	36cm	36cm				
				-	-	-	-				
				+	+	+	+				
				-	-	-	-				
56ec		45sec						Response: GOOD			

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Genamuthu	Age/Sex	58/M	O.P.No.	63731	From	03.11.08	To	05.12.08	No. of days Treated	33
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (LEFT)			
Complaints and duration		Pain and swelling in the left knee joint since 2 months				Occupation		Farmer			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				-	+++	-	-	TC : 9000 cell/cumm DC : P 60% L35% E 5% ESR ½ hour 9 mm 1 hour 18 mm Hb 80% Bl. Sugar (R) 98mg% Bl. Urea 29mg% S. Cholesterol 210 mg%	1) Joint space narrowing 2) Marginal Osteopytes Impression : Left knee joint Osteo arthritis	TC : 9200 cell/cumm DC : P 62% L.32% E6% ESR ½ hour 6mm 1 hour 12mm Hb 82% Bl. Sugar (R) 101 mg% Bl. Urea 30mg% S.Cholesterol 206 mg%	1) Joint space narrowing 2) Marginal Osteopytes Impression : Left knee joint Osteo arthritis
2. Stiffness				-	+	-	-				
3. Limitation of movement (30°-I,60°-II,60°<)				-	I	-	-				
4. Measurement				37cm	38cm	37cm	37cm				
5. Tenderness				-	+	-	-				
6. Crepitation on movements				-	+	-	+				
7. Swelling				-	++	-	-				
8. Taking time to walk for 100 feet distance				56sec		45sec		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Response: GOOD	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	

Name	Subbulakshmi	Age/Sex	50/F	O.P.No.	63811	From	04.11.08	To	05.12.08	No. of days Treated	32	
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (LEFT)				
Complaints and duration		Pain and swelling in the left knee joint since 1 ½ months				Occupation		House wife				
				Before treatment		After treatment		Investigation				
								Before treatment		After treatment		
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings	
1. Pain				-	++	-	-	TC : 9900 cell/cumm DC : P 69% L29% E 2% ESR ½ hour 12 mm 1 hour 25 mm Hb 72% Bl. Sugar (R) 104mg% Bl. Urea 26mg% S. Cholesterol 178 mg%	1) Subchondral Sclerosis 2) Marginal Osteopytes Impression : Left knee joint Osteo arthritis	TC : 9700 cell/cumm DC : P 64% L.32% E4% ESR ½ hour 9mm 1 hour 18mm Hb 73% Bl. Sugar (R) 128 mg% Bl. Urea 24mg% S.Cholesterol 180 mg%		1) Subchondral Sclerosis 2) Marginal Osteopytes Impression : Left knee joint Osteo arthritis
2. Stiffness				-	+	-	-					
3. Limitation of movement (30°-I,60°-II,60°<)				-	II	-	-					
4. Measurement				38cm	38.5cm	38cm	38cm					
5. Tenderness				-	m	-	-					
6. Crepitation on movements				-	+	-	+					
7. Swelling				-	+	-	-					
									URINE : Albumin : NIL Sugar : NIL Deposit : NAD			
8. Taking time to walk for 100 feet distance				54sec		44sec			Albumin : NIL Sugar : NIL Deposit : NAD		Response: GOOD	

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Kathar mythin	Age/Sex	48/M	O.P.No.	63857	From	04.11.08	To	06.12.08	No. of days Treated	33								
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (LEFT)											
Complaints and duration		Pain and swelling in theleft knee joint since 5 years				Occupation		Servant											
				Before treatment		After treatment		Investigation											
				Right		Left		Before treatment		After treatment									
								Blood		Radiological findings									
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling				-		+++		-		+++		TC : 7600 cell/cumm DC : P 68% L30% E 2% ESR ½ hour 5 mm 1 hour 10 mm Hb 78%		1) Joint space narrowing Impression : Left knee joint Osteo arthritis		TC : 7500 cell/cumm DC : P 64% L.32% E4% ESR ½ hour 4mm 1 hour 8mm Hb 80%		1) Joint space narrowing Impression : Left knee joint Osteo arthritis	
				39cm		40cm		39cm		40cm		Bl. Sugar (R) 225mg% Bl. Urea 26mg% S. Cholesterol 210 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD		Bl. Sugar (R) 210 mg% Bl. Urea 24mg% S.Cholesterol 212 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
				58sec		55sec						Response: POOR							
				8. Taking time to walk for 100 feet distance															

Name	Tamil selvi	Age/Sex	45/F	O.P.No.	63867	From	04.11.08	To	06.12.08	No. of days Treated	33	
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)				
Complaints and duration		Pain and swelling in both knee joint since 1 year				Occupation		House wife				
			Before treatment		After treatment		Investigation					
							Before treatment			After treatment		
			Right	Left	Righ t	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			++	+++	-	+	TC : 8400 cell/cumm DC : P 65% L30% E 5% ESR ½ hour 13 mm 1 hour 26 mm Hb 70%		1) Reduced Joint space Impression : Bilateral Osteo arthritis	TC : 8600 cell/cumm DC : P 64% L.34% E2% ESR ½ hour 10mm 1 hour 20mm Hb 71%		1) Reduced Joint space Impression : Bilateral Osteo arthritis
			+	+	-	-	Bl. Sugar (R) 101mg% Bl. Urea 27mg% S. Cholesterol 182 mg%			Bl. Sugar (R) 103 mg% Bl. Urea 26mg% S.Cholesterol 186 mg%		
			II	I	-	II			URINE : Albumin : NIL Sugar : NIL Deposit : 1-2 epithelial cells			URINE : Albumin : NIL Sugar : NIL Deposit : NAD
			39cm	40cm	39cm	39cm						
			+	+	-	-						
			+	+	+	+						
			+	++	-	+						
8. Taking time to walk for 100 feet distance			62sec		58sec				Response: FAIR			

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

OUT - PATIENTS

Name	Papathi	Age/Sex	65/F	O.P.No.	63868	From	04.11.08	To	06.12.08	No. of days Treated	33
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)			
Complaints and duration	Pain and swelling in both knee joint since 7 months						Occupation	House wife			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				++	++	-	-	TC : 8900 cell/cumm	1) Joint space narrowing	TC : 8700 cell/cumm	1) Joint space narrowing
2. Stiffness				+	+	-	-	DC : P 66% L31% E 3%	2) Marginal Osteopytes	DC : P 64% L.34% E2%	2) Marginal Osteopytes
3. Limitation of movement (30°-I,60°-II,60°<)				II	II	-	-	ESR	Impression :	ESR	Impression :
4. Measurement				39cm	39cm	38cm	38cm	1/2 hour 12 mm	Bilateral Osteo arthritis	1/2 hour 10mm	Bilateral Osteo arthritis
5. Tenderness				+	+	-	-	1 hour 25 mm	URINE :	1 hour 20mm	URINE :
6. Crepitation on movements				+	+	+	+	Hb 68%	Albumin : NIL	Hb 70%	Albumin : NIL
7. Swelling				+	+	-	-	Bl. Sugar (R) 103mg%	Sugar : NIL	Bl. Sugar (R) 104 mg%	Sugar : NIL
								Bl. Urea 29mg%	Deposit : NAD	Bl. Urea 30mg%	Deposit : NAD
								S. Cholesterol 192 mg%		S.Cholesterol 194 mg%	
8. Taking time to walk for 100 feet distance				68sec		58sec		Response: GOOD			

Name	Varadharajan	Age/Sex	45/M	O.P.No.	64620	From	07.11.08	To	06.12.08	No. of days Treated	30
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (LEFT)			
Complaints and duration	Pain and swelling in the left knee joint since 1 month						Occupation	Servant			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				-	++	-	-	TC : 8700 cell/cumm	1) Reduced Joint space	TC : 8800 cell/cumm	1) Reduced Joint space
2. Stiffness				-	+	-	-	DC : P 66% L31% E 3%	Impression : Left	DC : P 64% L.32% E4%	Impression :
3. Limitation of movement (30°-I,60°-II,60°<)				-	II	-	-	ESR	knee joint Osteo arthritis	ESR	Left knee joint Osteo arthritis
4. Measurement				37 cm	37.5c	37cm	37cm	1/2 hour 12 mm	URINE :	1/2 hour 9mm	URINE :
5. Tenderness				-	m	-	-	1 hour 24 mm	Albumin : NIL	1 hour 18mm	Albumin : NIL
6. Crepitation on movements				-	+	-	+	Hb 84%	Sugar : NIL	Hb 85%	Sugar : NIL
7. Swelling				-	+	-	-	Bl. Sugar (R) 120mg%	Deposit : NAD	Bl. Sugar (R) 116 mg%	Deposit : NAD
								Bl. Urea 31mg%		Bl. Urea 27mg%	
								S. Cholesterol 196 mg%		S.Cholesterol 195 mg%	
8. Taking time to walk for 100 feet distance				50sec		40sec		Response: GOOD			

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

IN - PATIENTS

Name	Ponpandian	Age/Sex	65/M	I.P.No.	2842	From	14.10.08	To	12.11.08	No. of days Treated	30
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 6 months					Occupation	Farmer			
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Righ t	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				++	++	-	-	TC : 9100 cell/cumm	1) Subchondral Sclerosis	TC : 9200 cell/cumm	1) Subchondral Sclerosis
2. Stiffness				+	+	-	-	DC : P 58% L40% E 2%	2) Marginal Osteopytes	DC : P 60% L.36% E4%	2) Marginal Osteopytes
3. Limitation of movement (30°-I,60°-II,60°<)				II	II	-	-	½ hour 9 mm	Impression :	½ hour 7mm	Impression :
4. Measurement				38 cm	38cm	38cm	38cm	1 hour 18 mm	Bilateral Osteo arthritis	1 hour 14mm	Bilateral Osteo arthritis
5. Tenderness				-	-	-	-	Hb 80%	URINE :	Hb 81%	URINE :
6. Crepitation on movements				+	+	+	+	Bl. Sugar (R) 130mg%	Albumin : NIL	Bl. Sugar (R) 120 mg%	Albumin : NIL
7. Swelling				-	-	-	-	Bl. Urea 26mg%	Sugar : NIL	Bl. Urea 27 mg%	Sugar : NIL
8. Taking time to walk for 100 feet distance				60sec		50sec		S. Cholesterol 188 mg%	Deposit : NAD	Response: GOOD	Deposit : NAD

Name	Selliya	Age/Sex	59/M	I.P.No.	2854	From	16.10.08	To	11.11.08	No. of days Treated	27
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 3 months					Occupation	Daily Labour			
			Before treatment		After treatment		Investigation				
							Before treatment		After treatment		
			Right	Left	Right	Left	Blood		Radiological findings	Blood	
1. Pain			+++	++	-	-	TC : 7800 cell/cumm DC : P 67% L30% E 3% ESR ½ hour 10 mm 1 hour 15 mm Hb 74% Bl. Sugar (R) 105mg% Bl. Urea 35mg% S. Cholesterol 185 mg%	1) Reduced Joint space 2) Subchondral sclerosis Impression : Bilateral Osteo arthritis	TC : 8000 cell/cumm DC : P 64% L.34% E2% ESR ½ hour 7mm 1 hour 14mm Hb 76% Bl. Sugar (R) 108 mg% Bl. Urea 32mg% S.Cholesterol 188 mg%		1) Reduced Joint space 2) Subchondral sclerosis Impression : Bilateral Osteo arthritis URINE : Albumin : NIL Sugar : NIL Deposit : NAD
2. Stiffness			+	+	-	-					
3. Limitation of movement (30°-I,60°-II,60°<)			I	II	-	-					
4. Measurement			39 cm	37.5c	37cm	37cm		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	1 hour 14mm Hb 76% Bl. Sugar (R) 108 mg% Bl. Urea 32mg% S.Cholesterol 188 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD
5. Tenderness			+	m	-	-					
6. Crepitation on movements			+	+	+	+					
7. Swelling			++	+	-	-		Response: GOOD			
8. Taking time to walk for 100 feet distance			56sec		47sec						

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

IN - PATIENTS

Name	Ponnammal	Age/Sex	55/F	I.P.No.	2827	From	18.10.08	To	16.11.08	No. of days Treated	30
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (RIGHT)			
Complaints and duration		Pain and swelling in the right knee joint since 1 year				Occupation	House wife				
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Righ t	Left	Blood		Radiological findings	Blood	
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling 8. Taking time to walk for 100 feet distance			++	-	-	-	TC : 7900 cell/cumm DC : P 64% L32% E 4% ESR ½ hour 12 mm 1 hour 24 mm Hb 68% Bl. Sugar (R) 108mg% Bl. Urea 24mg% S. Cholesterol 212 mg%	1) Marginal Osteopytes 2) Soft tissue swelling Impression : Right knee joint Osteo arthritis	TC : 8000 cell/cumm DC : P 66% L.30% E4% ESR ½ hour 9mm 1 hour 18mm Hb 71% Bl. Sugar (R) 110 mg% Bl. Urea 27 mg% S.Cholesterol 210 mg%	1) Marginal Osteopytes 2) Reduced Soft tissue swelling Impression : Right knee joint Osteo arthritis	
			+	-	-	-					
			I	-	-	-					
			37 cm	36cm	36cm	36cm					
			+	-	-	-					
			+	-	+	-					
			++	-	-	-					
			58sec		48sec						

Name	Abdul Rhman	Age/Sex	78/M	I.P.No.	2810	From	20.10.08	To	08.11.08	No. of days Treated	20	
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (LEFT)				
Complaints and duration		Pain and swelling in the left knee joint since 8 months				Occupation		Fruit seller				
			Before treatment		After treatment		Investigation					
							Before treatment			After treatment		
			Right	Left	Right	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			-	++	-	-	TC : 9100 cell/cumm DC : P 62% L34% E 4% ESR ½ hour 8 mm 1 hour 16 mm Hb 76%		1) Reduced Joint space 2) Subchondral sclerosis Impression : Left knee joint Osteo arthritis	TC : 9200 cell/cumm DC : P 64% L.34% E2% ESR ½ hour 6mm 1 hour 11mm Hb 79%		1) Reduced Joint space 2) Subchondral sclerosis Impression : Left knee joint Osteo arthritis
			38 cm	38.5c	38cm	38cm	Bl. Sugar (R) 118 mg% Bl. Urea 32mg% S. Cholesterol 192 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 120 mg% Bl. Urea 30mg% S.Cholesterol 196 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD
			-	m	-	-						
			-	+	-	+						
			-	+	-	-						
			66sec		52sec							

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

IN - PATIENTS

Name	Ganapathiyammal	Age/Sex	52/F	I.P.No.	2880	From	27.10.08	To	19.11.08	No. of days Treated	24		
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)					
Complaints and duration		Pain and swelling in both knee joint since 2 years				Occupation		House wife					
				Before treatment		After treatment		Investigation					
								Before treatment		After treatment			
				Right	Left	Righ t	Left	Blood		Radiological findings	Blood		Radiological findings
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling 8. Taking time to walk for 100 feet distance				++	++	+	-	TC : 8700 cell/cumm DC : P 64% L33% E 3% ESR ½ hour 5 mm 1 hour 10 mm Hb 78%		1) Subchondral Sclerosis 2) Marginal Osteopytes Impression : Bilateral Osteo arthritis	TC : 8900 cell/cumm DC : P 65% L.32% E3% ESR ½ hour 4mm 1 hour 9mm Hb 79%		1) Subchondral Sclerosis 2) Marginal Osteopytes Impression : Bilateral Osteo arthritis
				+	+	-	-	Bl. Sugar (R) 91mg% Bl. Urea 27mg% S. Cholesterol 191 mg%			Bl. Sugar (R) 92 mg% Bl. Urea 25 mg% S.Cholesterol 196 mg%		
				I	II	II	-			URINE : Albumin : NIL Sugar : NIL Deposit : NAD			URINE : Albumin : NIL Sugar : NIL Deposit : NAD
				38.5	38cm	38cm	38cm						
				cm	+	-	-						
				+	+	+	+						
				+	+	+	-						
				++									
56sec		50sec						Response: FAIR					

Name	Saraswathi	Age/Sex	55/F	I.P.No.	2892	From	18.10.08	To	17.11.08	No. of days Treated	31
Drug	Linga Chendooram 65 milligram B.D.with Butter					Diagnosis	AZHAL KEEL VAYU (BOTH)				
Complaints and duration	Pain in both knee joint since 11months					Occupation	Fruit seller				
				Before treatment		After treatment		Investigation			
								Before treatment		After treatment	
				Right	Left	Right	Left	Blood	Radiological findings	Blood	Radiological findings
1. Pain				++	++	-	-	TC : 8500 cell/cumm	1) Joint space narrowing	TC : 8600 cell/cumm	1) Joint space narrowing
2. Stiffness				+	+	-	-	DC : P 67% L30% E 3%	2) Marginal	DC : P 63% L.32% E5%	2) Marginal
3. Limitation of movement (30°-I,60°-II,60°<)				II	II	-	-	ESR	Osteo pytes	ESR	Osteo pytes
4. Measurement				35 cm	35cm	35cm	35cm	½ hour 6 mm	Impression :	½ hour 4mm	Impression :
5. Tenderness				-	-	-	-	1 hour 12 mm	Bilateral Osteo	1 hour 8 mm	Bilateral Osteo
6. Crepitation on movements				+	+	+	+	Hb 76%	arthritis	Hb 78%	arthritis
7. Swelling				-	-	-	-	Bl. Sugar (R) 90mg%	URINE : Albumin : NIL Sugar : NIL Deposit : 1-2 pus cells	Bl. Sugar (R) 94 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD
8. Taking time to walk for 100 feet distance								Bl. Urea 27mg%		Bl. Urea 25mg%	
				52sec		42sec		S. Cholesterol 210 mg%		Response: GOOD	

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

IN - PATIENTS

Name	Lathis	Age/Sex	50/M	I.P.No.	2839	From	24.10.08	To	22.11.08	No. of days Treated	30	
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (RIGHT)				
Complaints and duration		Pain and swelling in the right knee joint since 3 months				Occupation		Farmer				
				Before treatment		After treatment		Investigation				
								Before treatment		After treatment		
				Right	Left	Righ t	Left	Blood		Radiological findings	Blood	
1. Pain				+++	-	-	-	TC : 8300 cell/cumm DC : P 50% L46% E 4% ESR ½ hour 15 mm 1 hour 30 mm Hb 78% Bl. Sugar (R) 160mg% Bl. Urea 26mg% S. Cholesterol 202 mg%	1) Joint space narrowing Impression : Right knee joint Osteo arthritis	TC : 8500 cell/cumm DC : P 56% L.40% E4% ESR ½ hour 11mm 1 hour 20mm Hb 80%		1) Joint space narrowing Impression : Right knee joint Osteo arthritis
2. Stiffness				+	-	-	-					
3. Limitation of movement (30°-I,60°-II,60°<)				I	-	-	-					
4. Measurement				39 cm	38cm	38cm	38cm					
5. Tenderness				+	-	-	-		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 145 mg% Bl. Urea 24 mg% S.Cholesterol 204 mg%		URINE : Albumin : NIL Sugar : NIL Deposit : NAD
6. Crepitation on movements				+	-	+	-					
7. Swelling				++	-	-	-					
8. Taking time to walk for 100 feet distance				56sec		44sec		Response: GOOD				

Name	Petchiammal	Age/Sex	40/F	I.P.No.	2903	From	20.10.08	To	21.11.08	No. of days Treated	33
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (LEFT)			
Complaints and duration		Pain and swelling in the left knee joint since 2 months				Occupation		House wife			
			Before treatment		After treatment		Investigation				
							Before treatment			After treatment	
			Right	Left	Righ t	Left	Blood		Radiological findings	Blood	
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling			-	++	-	-	TC : 8900 cell/cumm DC : P 65% L31% E 4% ESR ½ hour 7 mm 1 hour 18 mm Hb 78% Bl. Sugar (R) 85mg% Bl. Urea 32mg% S. Cholesterol 215 mg%	1) Reduced Joint space Impression : Left knee joint Osteo arthritis	TC : 8800 cell/cumm DC : P 68% L.30% E2% ESR ½ hour 5mm 1 hour 10mm Hb 80% Bl. Sugar (R) 82 mg% Bl. Urea 33mg% S.Cholesterol 210 mg%	1) Reduced Joint space Impression : Left knee joint Osteo arthritis	
			-	+	-	-					
			-	II	-	-					
			37 cm	37.5c	37cm	37cm					
			-	m	-	-					
			-	+	-	+					
			-	+	-	-					
8. Taking time to walk for 100 feet distance			50 sec		40sec						
							Response: GOOD				

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms

IN - PATIENTS

Name	Buthapandi	Age/Sex	60/M	I.P.No.	2831	From	04.10.08	To	26.11.08	No. of days Treated	23
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)			
Complaints and duration		Pain in both knee joint since 7 months					Occupation	Daily labour			
				Before treatment		After treatment		Investigation			
				RightLeft		RightLeft		Before treatment		After treatment	
								Blood		Radiological findings	
1. Pain				++	++	-	-	TC : 8100 cell/cumm		1) Subchondral Sclerosis	
2. Stiffness				+	+	-	-	DC : P 64% L30% E 6%		DC : P 66% L.32% E2%	
3. Limitation of movement (30°-I,60°-II,60°<)				I	II	-	-	ESR		ESR	
4. Measurement				36 cm	36cm	36cm	36cm	½ hour 8 mm		½ hour 6mm	
5. Tenderness				-	-	-	-	1 hour 16 mm		1 hour 12mm	
6. Crepitation on movements				+	+	+	+	Hb 80%		Hb 81%	
7. Swelling				-	-	-	-	Bl. Sugar (R) 98mg%		Bl. Sugar (R) 101 mg%	
								Bl. Urea 34mg%		Bl. Urea 35 mg%	
								S. Cholesterol 196 mg%		S.Cholesterol 198 mg%	
8. Taking time to walk for 100 feet distance				60sec		50sec		URINE : Albumin : NIL Sugar : NIL Deposit : NAD		URINE : Albumin : NIL Sugar : NIL Deposit : NAD	
										Response: GOOD	

Name	Pachamal	Age/Sex	75/M	I.P.No.	2796	From	16.10.08	To	14.11.08	No. of days Treated	31
Drug	Linga Chendooram 65 milligram B.D.with Butter						Diagnosis	AZHAL KEEL VAYU (BOTH)			
Complaints and duration		Pain and swelling in both knee joint since 8 months				Occupation		Farmer			
				Before treatment		After treatment		Investigation			
				RightLeft		RightLeft		Before treatment		After treatment	
								Blood		Radiological findings	
1. Pain 2. Stiffness 3. Limitation of movement (30°-I,60°-II,60°<) 4. Measurement 5. Tenderness 6. Crepitation on movements 7. Swelling				++	++	-	-	TC : 8000 cell/cumm DC : P 55% L40% E 5% ESR ½ hour 8 mm	1) Reduced Joint space 2) Subchondral sclerosis	TC : 8100 cell/cumm DC : P 60% L.36% E4% ESR ½ hour 6mm	1) Reduced Joint space 2) Subchondral sclerosis
				37 cm	37.5cm	37cm	37cm	1 hour 15 mm	Impression : Bilateral Osteo	1 hour 12mm	Impression : Bilateral Osteo
				-	m	-	-	Hb 70%	arthritis	Hb 72%	arthritis
				+	-	+	+	Bl. Sugar (R) 84mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD	Bl. Sugar (R) 86 mg%	URINE : Albumin : NIL Sugar : NIL Deposit : NAD
				+	+	-	-	Bl. Urea 28mg%		Bl. Urea 30mg%	
					++			S. Cholesterol 198 mg%		S.Cholesterol 196 mg%	
				8. Taking time to walk for 100 feet distance				68sec		58sec	

+ Mild ++ Moderate +++ Severe

Good Response – Significant relief of symptoms Fair Response – Partial relief of symptoms Poor Response – In significant relief of symptoms